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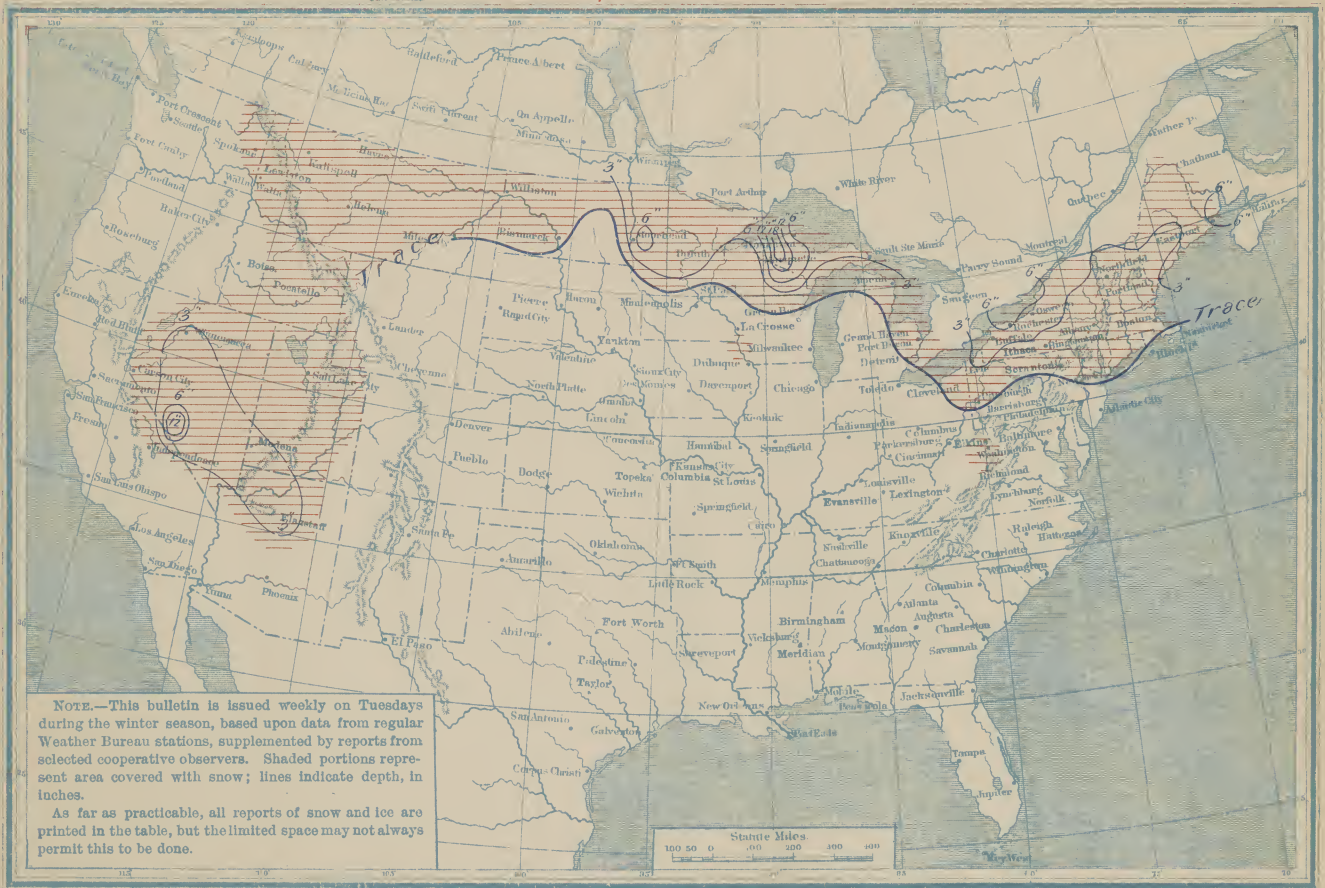
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U. S. DEPARTMENT OF AGRICULTURE  
WEATHER BUREAU  
SNOW AND ICE BULLETIN.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., December 4, 1906.

DEPTH OF SNOW.

The portions of the country covered with snow at 8 p. m., December 3, 1906, that were free from snow at the corresponding date of 1905, are southern New England, a small area in the upper Ohio Valley, and the western portions of the middle Plateau region. A large area embracing portions of the northern Rocky Mountain region, the upper Mississippi Valley, portions of the upper Mississippi Valley, and the southern part of the upper Lake region, that was covered to slight depths on December 3, 1905, was free from snow on December 3, 1906. Within the area covered at 8 p. m., December 3, 1906, from Idaho eastward to the upper Lakes, there was from 1 inch to 17 inches more snow on December 3, 1905, while in the lower Lake region and New England the depths this year are from 1 inch to 6 inches greater than on the same date in 1905. The greatest depth reported this year is 23 inches at Humboldt, in the Upper Michigan Peninsula.

ICE IN RIVERS, HARBORS, ETC.

At 8 p. m. December 3, 1906, there was no ice in the upper Mississippi River, and practically none was reported in the Missouri River at stations southward of Bismarck, at which place ice was 4 inches thick. In the Red River of the North, at Moorhead, Minn., ice was 8 inches thick. In western Lake Superior, in the vicinity of Duluth, ice was 4 inches thick, but none was reported from eastern Lake Superior or from stations on the lower Lakes. In the rivers of northern New England ice ranged from 1 to 3 inches.

The following special reports have been received by telegraph:

Gardiner, Me., December 3.—The Kennebec River is closed, the ice being 1 inch in thickness. The surface is in good condition for the ice harvest.

Brattleboro, Vt., December 3.—In the Connecticut River ice is 2 inches thick near the shore, but is floating in the channel.

Albany, N. Y., December 4.—In the Mohawk Valley the snow averages 2 inches in depth; in the Hudson Valley the average depth is one inch. There was no ice in the Mohawk or Hudson rivers last night; there is one-half inch of ice at Albany this morning.

Port Huron, Mich., December 3.—There is light floating ice at this place.

Sioux City, Iowa, December 4.—There is some shore ice in the Missouri River.

At the corresponding date of 1905 ice in the Missouri River was 8.5 inches thick at Pierre, S. Dak.; there were 4 inches in the Des Moines River at Des Moines, Iowa; there was floating ice in the upper Mississippi River from St. Paul, Minn., to La Crosse, Wis., and considerable ice in the upper Lakes. There was, however, somewhat less ice in the rivers of New England in 1905 than at this date.

JAMES BERRY, Chief of Climatological Division.

DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., DECEMBER 3, 1906.

Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
Arizona.	Inches	Inches	Minnesota—Cont'd.	Inches	Inches	North Dakota.	Inches	Inches
Flagstaff.....	3		New London.....	T.		Bismarck.....	1	4.0
Colorado			Montana.			Ohio.		
Grand Junction.....	T.		Havre.....	T.		Cadiz.....	T.	0.0
Connecticut.			Helena.....	2		Garrettsville.....	T.	
Hartford.....	0.0		Kalispell.....	T.		Pennsylvania.		
New Haven.....	T.	0.0	Miles City.....	T.		Claysville.....	T.	
Idaho.			Nevada.			Erie.....	1	0.0
Footello.....	T.	6.0	Tonopah.....	16		Saegerstown.....	3	
Iowa.			Winnemucca.....	4		Scranton.....	2	
Sioux City.....	*		New Hampshire.			Skidmore.....	T.	
Maine.			Bethlehem.....	1		South Eaton.....	1	
Bangor.....	2	3.0	Concord.....	1	1.0	State College.....	T.	
Buckfield.....	3		Hanover.....	1		Towanda.....	2	
Eastport.....	6	2.5	Keene.....	T.		Rhode Island.		
Gardiner.....	2	1.0	New Jersey.			Kingston.....	2	
Leviston.....	2	1.5	Browns Mills.....	T.		Providence.....	3	0.0
Orono.....	4		Charlotteburg.....	2		South Dakota.		
Portland.....	3		Newark.....	4		Huron.....		4.5
Massachusetts.			New York.			Utah.		
Amherst.....	T.		Addison.....	1		Modena.....	4	
Boston.....	1		Albany.....	1	0.0	Salt Lake City.....	T.	
Concord.....	2		Auburn.....	4		Vermont.		
Fitchburg.....	2		Binghamton.....	2		Brattleboro.....		2.0
Mansfield.....	1		Buffalo.....	5	0.0	Burlington.....	2	
Nantucket.....	T.	0.0	Canton.....	2		Northfield.....	2	
Michigan.			Cooperstown.....	4		St. Johnsbury.....	2	
Alpena.....	1	0.0	Franklinville.....	4		Washington.		
Odumet.....	16		Geneva.....	2		Spokane.....	1	
Detroit.....	T.	0.0	Ithaca.....	4		West Virginia.		0.0
Escanaba.....	T.	0.0	Lowville.....	2		Elkins.....	T.	
Houghton.....	2	0.5	New York.	T.		Wisconsin.		
Humboldt.....	23		Ogdensburg.....	3		Ashland.....	2	
Marquette.....	5	0.0	Oswego.....	4	0.0	Green Bay.....	T.	0.0
Port Huron.....	1	†	Plattsburg.....	3		Koepenick.....	12	
Saginaw.....	T.		Port Jervis.....	T.		Medford.....	1	
Sault Ste. Marie.....	5	0.0	Rochester.....	6	0.0	Stevens Point.....	T.	
Minnesota.			Rome.....	4		Viroqua.....	T.	
Alexandria.....	4		Saranac Lake.....	4		Wausau.....	1	
Detroit City.....	7		Saratoga.....	1		Wyoming.		
Duluth.....	4	4.0	Setauket.....	1		Yellowstone Park.....	T.	
Milaca.....	5		Syracuse.....	3				
Moorhead.....	3	8.0	Watertown.....	6				

\* Shore ice.

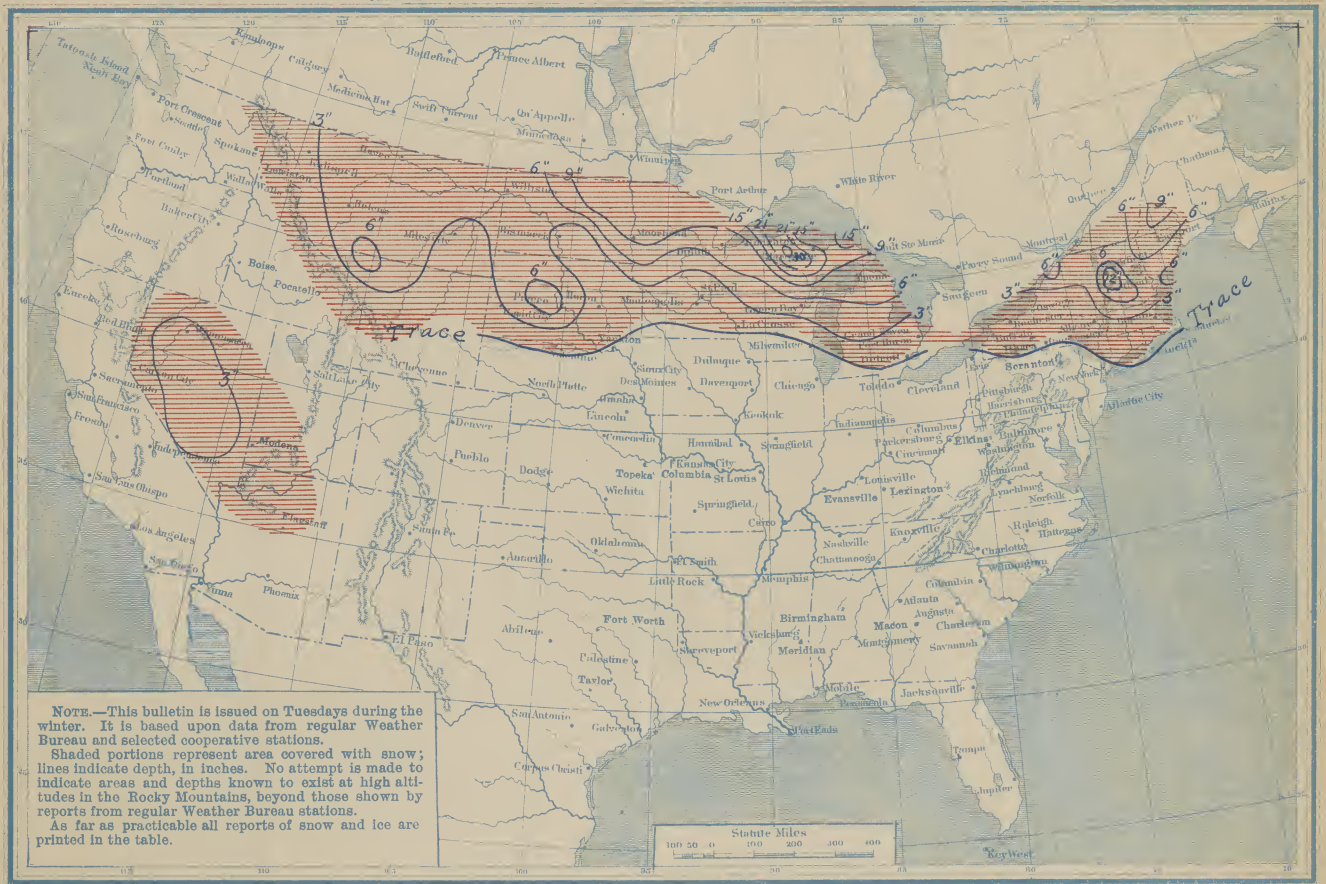
† Floating ice.

T. Indicates trace.



U. S. DEPARTMENT OF AGRICULTURE,  
WEATHER BUREAU.  
**SNOW AND ICE BULLETIN.**

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE  
Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., December 11, 1906.

DEPTH OF SNOW.

Only the extreme northern portions of the country east of the Rocky Mountains were covered with snow at 8 p. m., December 10, 1906. The greatest depths are reported from stations in the upper Michigan Peninsula, where they ranged from 8 to 30 inches. In northern New England the depths generally ranged from 3 to 13 inches. From the upper Lake region westward the area covered on the 10th was considerably greater than on the 3d, while over the lower Lake region and the northern portion of the Middle Atlantic States it was somewhat smaller. In the northern portion of New England and in western New York the depths were from 1 inch to 7 inches greater than on the 3d, and largely increased depths are reported from stations in the upper Lake region and the upper Missouri and Red River of the North valleys. Much snow has disappeared during the week over the middle and southern Plateau regions.

The area covered and the depths now reported are generally greater than they were at the corresponding date of 1905, altho in portions of the Plateau region and at some stations in southern New England and the Lake region both the area covered and the depths reported are less.

ICE IN RIVERS, HARBORS, ETC.

At 8 p. m., December 10, 1906, the thickness of ice in the upper Missouri River from Williston, N. Dak., to Bismarck, N. Dak., ranged from 10 to 17 inches, or from 4 to 13 inches more than was reported on December 3. No ice was reported on December 10 from the Missouri River southward of Bismarck, except floating ice at Omaha, Nebr. In the upper Mississippi River, where there was no ice on December 3, there was on the 10th instant 2 inches at St. Paul, Minn., and floating ice at La Crosse, Wis., Dubuque and Davenport, Iowa, and Hannibal, Mo. A considerable increase in the thickness of ice during the week occurred in the northern portion of the upper Lake region and in the rivers of New England. In the latter, ice now generally ranges from 7 to 8 inches.

The following special reports have been received by telegraph:

*Gardiner, Me., December 10.*—The weather has been very favorable for the ice crop during the past week.

*Albany, N. Y., December 11.*—In the Mohawk Valley the snow averages 3 inches in depth; in the Hudson Valley the average depth is 2 inches. Ice ranges from 1 inch to 6 inches in thickness in the Hudson River and from 2 to 5 inches in the Mohawk River.

*Esconaba, Mich., December 10.*—There is much shore ice here.

*Duluth, Minn., December 10.*—The harbor is covered with ice, except in western Superior Bay. Boats are assisted by tugs; navigation is about suspended.

*La Crosse, Wis., December 11.*—The river at this point is half covered with floating ice.

*Dubuque, Iowa, December 10.*—The river at this place is full of floating ice.

*Davenport, Iowa, December 10.*—There is much floating ice in the river here.

*Hannibal, Mo., December 10.*—The river here is about one-fourth full of floating ice.

*Omaha, Nebr., December 10.*—There is a large quantity of small ice floating in the river at this point.

There is now less ice in the upper Missouri River than there was at the corresponding date of 1905, but in the upper Mississippi River and to the eastward there is more, the rivers of New England having from 3 to 8 inches more than at this date last year.

JAMES BERRY, Chief of Climatological Division.

DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., DECEMBER 10, 1906.

Stations.		Stations.		Stations.	
Snow.		Snow.		Snow.	
Inches		Inches		Inches	
<b>Arizona.</b>		<b>Minnesota—Cont'd.</b>		<b>New York—Cont'd.</b>	
Flagstaff	1	Hinckley	9	Saratoga	3
<b>Connecticut.</b>		Minneapolis	1	Setauket	T
Hartford	1 1.5	Moorhead	10 12.0	Southampton	T
New Haven	1	Mora	1	Syracuse	2
West Simsbury	2	Morris	5	Watertown	2
<b>Iowa.</b>		New London	2	<b>North Dakota.</b>	
Davenport	†	St. Paul	T. 2.0	Bismarck	2 17.0
Dubuque	†	Wabasha	1	Devils Lake	11
<b>Maine.</b>		<b>Missouri.</b>		Williston	4 10.0
Bangor	4 8.0	Hannibal	†	<b>Rhode Island.</b>	
Buckfield	7	<b>Montana.</b>		Kingston	T
Cornish	5	Havre	4	Providence	1 0.0
Eastport	4 8.0	Helena	3	<b>South Dakota.</b>	
Gardiner	5 7.0	Miles City	1	Huron	1 8.0
Leviaston	5 8.0	<b>Nebraska.</b>		Pierre	7 0.0
Millinocket	9	Omaha	†	Rapid City	5
Orono	6	Valentine	T.	Yankton	T. 0.0
Portland	7	<b>Nevada.</b>		<b>Utah.</b>	
<b>Massachusetts.</b>		Tonopah	4	Modena	1
Adams	2	Winnemucca	4	<b>Vermont.</b>	
Amherst	1	<b>New Hampshire.</b>		Brattleboro	6 7.0
Boston	1	Bethlehem	2	Burlington	5
Concord	2	Concord	7 8.0	Northfield	13
Fitchburg	4	Durham	4	St. Johnsbury	5
Mansfield	1	Groveton	4	<b>Washington.</b>	
<b>Michigan.</b>		Hanover	3	Spokane	T
Alpena	6 0.0	Keene	5	<b>Wisconsin.</b>	
Battle Creek	T.	<b>New Jersey.</b>		Ashland	7
Big Rapids	3	Browns Mills	T.	Eau Claire	3
Calumet	21	<b>New York.</b>		Grand Rapids	2
Chatham	13	Albany	2 1.0	Green Bay	3 3.0
Carsonville	2	Auburn	2	Harvey	T
Escanaba	6 *	Buffalo	1	Koepenick	15
Grand Haven	4 0.0	Canton	6	La Crosse	1
Grand Marais	18	Cutchogue	1	Medford	3
Grand Rapids	2	Franklinville	3	New London	5
Hillsdale	T.	Geneva	1	Portage	1
Houghton	8 4.5	Herkimer	2	Shoebogyan	2
Iron River	30	Ithaca	T.	Stevens Point	3
Lansing	22	Lowville	2	Wausau	4
Manuelona	6	Ogdensburg	3	<b>Wyoming.</b>	
Marquette	16 0.0	Oswegatchie	4	Lander	1
Port Huron	1 3.0	Oswego	2 2.0	Yellowstone Park	8
Sault Ste. Marie	8 2.5	Poughkeepsie	1		
<b>Minnesota.</b>		Rochester	2 0.0		
Duluth	8 6.0	Saranac Lake	2		

\* Shore ice.

† Floating ice.

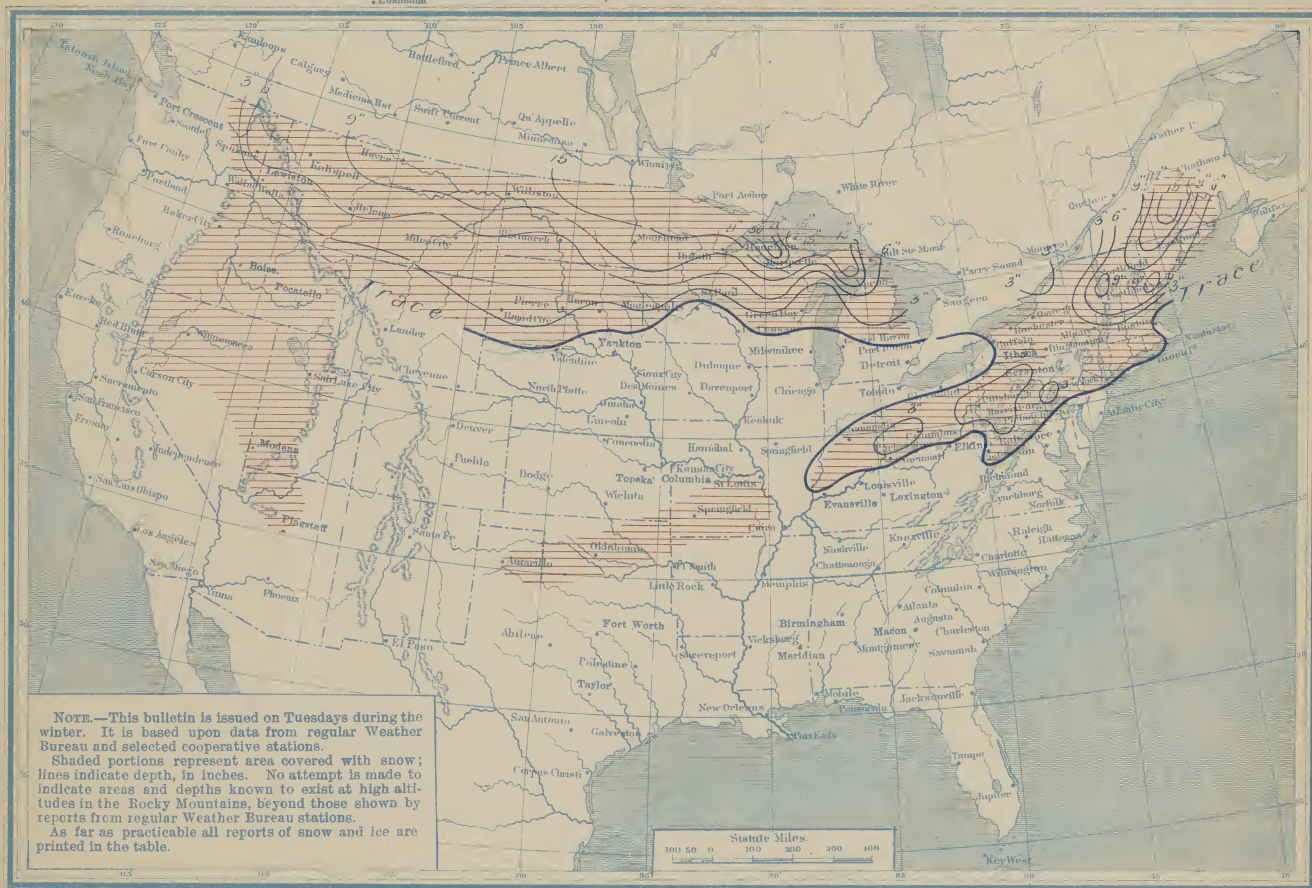
T. indicates trace.



U. S. DEPARTMENT OF AGRICULTURE,  
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Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., December 18, 1906.

DEPTH OF SNOW.

In the northern districts between the upper Lakes and northern Rocky Mountain region the area covered with snow at 8 p. m., December 17, was practically the same as on December 10. The depths, however, were materially greater, exceeding those reported on the 10th by 3 to 7 inches. Over the Lake region the southern limit of snow has receded northward somewhat since December 10, and the depths over the southern portion of the area covered are somewhat less, while over the northern portion of the Upper Michigan Peninsula greater depths are reported. Over the greater part of New England increased depths are also indicated and portions of the Middle Atlantic States and Ohio Valley that were free from snow on the 10th now have a slight covering, in some places ranging from 2 to 4 inches. A narrow strip extending from extreme northwestern Texas to eastern Missouri, over which there was no snow on the 10th, is also covered to slight depths.

At the corresponding date of the previous year there was much less snow in nearly all northern districts. Over portions of the Middle Atlantic States, however, there was more snow than there is at this date.

ICE IN RIVERS, HARBORS, ETC.

A general increase in the thickness of ice as compared with the reports of measurements made in the previous week (December 10) is indicated, the difference being most marked at stations in the upper Missouri and upper Mississippi rivers and in the rivers of New England, where it ranged from 1 inch to 5 inches. In the Lake region the changes have been slight.

The Missouri River is now frozen southward to Yankton, S. Dak., the ice being very thin at that station, but ranging from 4 to 20 inches northward of Pierre, S. Dak., Williston and Bismarck, N. Dak., reporting 15 and 20 inches, respectively. Thin shore ice is reported from Omaha, Nebr., and floating ice from all stations southward to Kansas City, Mo. In the upper Mississippi River ice ranges from 4 to 5 inches at La Crosse, Wis., and St. Paul, Minn., and floating ice exists as far south as Hannibal, Mo. Stations in the northern portion of the upper Lake region report ice ranging from 1.5 to 8 inches, and those on the rivers of New England from 4 to 13 inches.

The following special reports have been received by telegraph:

Gardiner, Me., December 17.—The weather has been mild and the ice crop is growing slowly.

Albany, N. Y., December 18.—In the Mohawk Valley the snow averages 1 inch in depth; in the Hudson Valley the average depth is from twice at Albany to 4 inches at Cortland. Ice averages 4 inches in thickness in the Hudson and Mohawk rivers.

Duluth, Minn., December 17.—The harbor is almost entirely covered with 6 to 10 inches of ice.

Dubuque, Iowa, December 17.—The river is full of floating ice.

Davenport, Iowa, December 17.—There is much floating ice in the river.

Hannibal, Mo., December 18.—The river is nearly full of floating ice.

Omaha, Nebr., December 17.—The river is half full of thin floating ice and there is thin shore ice on the Nebraska side.

Sioux City, Iowa, December 18.—There is light floating ice in the river.

Yankton, S. Dak., December 17.—The channel of the Missouri River was frozen over at this place at about 0 a. m. of the 17th. The ice is too thin for measurement, but is about half an inch thick.

In the rivers of New England and in the upper Mississippi and upper Missouri rivers there is now considerably more ice than there was at the corresponding date of the previous year, when, however, there was somewhat more in the lower Lake region than at this date.

JAMES BERRY, Chief of Climatological Division.

DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., DECEMBER 17, 1906.

Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
Arizona.			Minnesota—Cont'd.			Ohio—Cont'd.		
Flagstaff.	T.		Duluth.	11	8.0	Columbus.	3	0.0
Arkansas.			Moorhead.	13	14.0	Dayton.	4	
Bentonville.	T.		Mora.	6		Oklahoma.		
Connecticut.			New London.	4		Oklahoma.	1	
Hartford.	T.	4.5	St. Paul.	5.0		Oregon.		
New Haven.	1		Worthington.	T.		Baker City.	3	
West Simsbury.	T.		Missouri.			Pennsylvania.		
Idaho.			Ironton.	2		Claysville.	5	
Lewiston.	2	0.0	Kansas City.	T.	0	Easton.	2	
Pocatello.	T.		St. Louis.	T.	0.0	Ephrata.	T.	
Illinois.			Springfield.	2		Gordon.	6	
Chicago.	T.		Willowsprings.	T.		Harrisburg.	T.	0.0
Indiana.			Montana.			Indiana.	3	
Bloomington.	2		Havre.	11		Millintown.	2	
Indianapolis.	T.		Helena.	6		Pittsburg.	4	0.0
Princeton.	1		Kalispell.	6		Scranton.	T.	
Seymour.	2		Miles City.	5		Selins Grove.	3	
Iowa.			Nebraska.			Somerset.	4	
Davenport.	+		Omaha.	+		State College.	4	
Des Moines.	4.0		Valentine.	T.		Rhode Island.		
Dubuque.	+		Nevada.			Block Island.	T.	0.0
Sioux City.	+		Reno.	T.		Kingston.	2	
Maine.			Winnemucca.	2		Narragansett.	1	
Bangor.	7	9.5	New Hampshire.			South Dakota.		
Buckfield.	12		Bethlehem.	6		Huron.	1	11.0
Cornish.	11		Concord.	7	8.0	Pierre.	5	4.0
Danforth.	15		Durham.	7		Rapid City.	3	
Eastport.	3	13.0	Keene.	6		Yankton.		0.5
Gardiner.	6	8.0	New Jersey.			Texas.		
Lewiston.	7	8.5	Charlotteburg.	2		Amarillo.	T.	
Millinocket.	16		Flemington.	T.		Utah.		
Orono.	12		Newark.	1		Modena.	T.	
Portland.	9		Phillipsburg.	2		Salt Lake City.	2	
Maryland.			New York.			Vermont.		
Frederick.	T.		Albany.	T.	2.0	Brattleboro.	5	9.0
Massachusetts.			Canton.	4		Burlington.	2	
Adams.	2		Cutchoque.	T.		Northfield.	10	
Amherst.	1		De Ruyter.	T.		St. Johnsbury.	8	
Concord.	1		Geneva.	T.		Washington.		
Fitchburg.	2		Ithaca.	T.		Spokane.	7	
Nantucket.	1	0.0	Malone.	2		West Virginia.		
Michigan.			New York.	T.		Elkins.	T.	0.0
Alpena.	4	2.0	Ogdensburg.	2		New Martinsville.	1	
Big Rapids.	T.		Oswegatchie.	2		Wisconsin.		
Calumet.	28		Port Jervis.	T.	5.0	Ashland.	8	
Chatham.	14		Poughkeepsie.	3		Eau Claire.	1	
Escanaba.	2	1.5	Rochester.	T.		Grand Rapids.	2	
Grand Marais.	20		Saranac Lake.	4		Green Bay.	T.	5.0
Houghton.	12	5.5	Setauket.	T.		Koepenick.	12	
Humboldt.	30		Syracuse.	T.		La Crosse.	4	4.0
Iron River.	24		North Dakota.			Medford.	3	
Hackinaw City.	12		Bismarck.	4	20.0	New London.	T.	
Mancelona.	13		Devils Lake.	15		Stevens Point.	2	
Marquette.	18		Williston.	10	15.0	Viroqua.	T.	
Port Huron.	T.	0.0	Ohio.			Vausau.	4	
Sault Ste. Marie.	6	0.0	Bangorville.	T.		Wyoming.		
Minnesota.			Cincinnati.	2	0.0	Yellowstone Park.	2	
Bird Island.	T.							

\* Shore ice.

† Floating ice.

T. indicates trace.



# SNOW AND ICE BULLETIN.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., December 26, 1906.

## DEPTH OF SNOW.

The area covered with snow at 8 p. m., December 24, though somewhat greater than on the 17th instant, was still confined to the more northerly districts. No considerable depths existed, except in the Lake region and New England. Quite a large area in the upper Mississippi and Ohio valleys that was free from snow on the 17th was covered on the 24th, but the depths were very slight. In the lower Lake region and over the greater part of New England there was from 1 inch to 6 inches more snow than on the 17th. During the week considerable snow disappeared in the upper Missouri Valley and northern Rocky Mountain districts.

At this date last year there was considerably more snow than now in the upper Mississippi Valley and northern Rocky Mountain districts, but less in the lower Lake Region and New England.

## ICE IN RIVERS, HARBORS, ETC.

Further increase in the thickness of ice thruout the northern districts is indicated by the reports of measurements made at 8 p. m., December 24, 1906. As compared with the reports of the previous week (December 17), the increase ranges from 1 to 3 inches in the upper Missouri and upper Mississippi rivers; from 1 to 6 inches at stations on or near harbors on the Great Lakes; and generally from 2 to 3 inches in the rivers of New England. An increase of 5 inches is reported from Albany.

In the upper Missouri river ice now ranges from 4 inches at Yankton to 22 inches at Bismarck, with shore and floating ice at Sioux City, 3 inches at Omaha, and floating ice at Kansas City. In the Red River of the North ice is 18 inches thick at Moorhead. In the upper Mississippi, from Dubuque to St. Paul, ice ranges from 3 to 7 inches, with floating ice at Davenport and St. Louis and 5 inches at Hannibal. At stations on or near the Great Lakes ice generally ranges from 1 to 12 inches, the greatest thickness being reported from Duluth Harbor. In the rivers of New England ice generally ranges from 8 to 12 inches.

The following special reports have been received by telegraph:

Gardiner, Me., December 24.—The weather has been unfavorable for ice harvesting during the past week.

Concord, N. H., December 25.—Ice is from 8 to 11 inches thick in the lakes in this vicinity.

Brattleboro, Vt., December 24.—Ice cutting has begun.

Albany, N. Y., December 25.—In the Mohawk Valley the snow averages 2 inches in depth; in the Hudson Valley the average depth is from a trace at Athens to 7 inches at Corinth. The ice averages 8 inches in thickness in the Hudson River and 10 inches in the Mohawk.

Harrisburg, Pa., December 24.—The river is covered with floating ice.

Duluth, Minn., December 24.—Harbor ice ranges from 10 to 14 inches in thickness. The snow is from 2 to 4 feet deep in the woods.

Davenport, Iowa, December 24.—The river is nearly clear of ice here.

Hannibal, Mo., December 24.—The ice is gorged at the bridge this afternoon, but the channel of the river is open below; shore ice averages 5 inches in thickness.

St. Louis, Mo., December 24.—The river is full of heavy floating ice.

Kansas City, Mo., December 24.—There is thin floating ice on the river at this point.

Omaha, Nebr., December 24.—The river is practically frozen over here, although there are some open places in the channel.

A comparison of the current reports with those of the corresponding date of 1905 shows that there is now considerably more ice in the northern districts than there was at this date in 1905, the increase ranging from 3 to 9 inches in the rivers of New England, and from 1 inch to 8 inches in the Lake region.

JAMES BERRY, Chief of Climatological Division.

## DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., DECEMBER 24, 1906.

Stations.		Stations.		Stations.	
Snow.	Ice in rivers, harbors, etc.	Snow.	Ice in rivers, harbors, etc.	Snow.	Ice in rivers, harbors, etc.
<b>Arizona.</b>					
Flagstaff	1.	<b>Michigan—Cont'd.</b>		Cincinnati	2
<b>Connecticut.</b>		Houghton	13	Cleveland	3
Hartford	4 6.5	Humboldt	32	Columbus	2
<b>New Haven.</b>		Lansing	1	Dayton	4
Dist. of Columbia.	†	Mancelona	4	Garrettsville	4
<b>Illinois.</b>		Port Huron	4 6.5	Greenville	2
Ashton	T.	Saginaw	1	Sandusky	4 3.5
Chicago	T.	Sault Ste. Marie	6 6.0	Tiffin	5
Dixon	T.	South Haven	5	Toledo	4 1.5
Hillshoro	1	<b>Minnesota.</b>		<b>Oregon.</b>	
La Salle	T. 2.0	Bird Island	T.	Baker City	T.
Minonk	T.	Duluth	11	<b>Pennsylvania.</b>	
Monmouth	T.	Hinckley	10	Claysville	5
Olney	T.	Minneapolis	T.	Ephrata	T.
Peoria	T. 2.0	Moorhead	12 18.0	Erle	1 2.0
Springfield	T.	Mora	8	Harrisburg	T. *
Winnabago	1	St. Paul	T. 7.0	Millintown	3
<b>Indiana.</b>		Wabasha	2	Pittsburg	2 *
Auburn	5	<b>Missouri.</b>		Scranton	T.
Indianapolis	1	Hannibal	T. 5.0	Selling Grove	4
Lafayette	2	Kansas City	T.	Somerset	1
Marion	4	St. Louis	T.	Williamsport	2
Princeton	2	Springfield	T.	<b>Rhode Island.</b>	
Seymour	2	<b>Montana.</b>		Block Island	T. 0.0
<b>Iowa.</b>		Havre	3	Narragansett	1
Charles City	2	Miles City	2	Providence	2 0.0
Davenport	T. *	<b>Nebraska.</b>		<b>South Dakota.</b>	
Des Moines	T. 5.0	Omaha	3.0	Huron	1 12.0
Dubuque	T. 3.0	<b>Nevada.</b>		Pierre	1 5.0
Forest City	T.	Winnemucca	T.	Rapid City	T. 4.0
Iowa City	T. *†	<b>New Hampshire.</b>		<b>Utah.</b>	
Keokuk	T. 0.0	Bethlehem	8	Modena	T.
<b>Kentucky.</b>		Concord	12 10.0	Salt Lake City	T.
Catlettsburg	T.	Durham	13	<b>Vermont.</b>	
Lexington	1	<b>New York.</b>		Brattleboro	5 12.0
St. John	1	Addison	2	Burlington	4
<b>Maine.</b>		Albany	1 7.0	Northfield	11
Bangor	5 11.5	Auburn	6	<b>Virginia.</b>	
Cornish	18	Beaver River	8	Cape Henry	2
Danforth	9	Binghamton	1	Dale Enterprise	1
Eastport	T. 15.0	Buffalo	3 *	Richmond	T. 0.5
Gardiner	6 10.0	Canton	8	Wytheville	T.
Lewiston	11 8.5	Cooperstown	2	<b>West Virginia.</b>	
Millisocket	19	Cutchoy	T.	Elkins	7 0.0
Orono	8	Geneva	5	Grifton	3
Portland	10	Herkimer	3	Hinton	1
<b>Maryland.</b>		Ithaca	3	Huntington	T. 1
Easton	T.	Jamestown	4	New Martinsville	2
Grantsville	6	Ogdensburg	5	Parkersburg	T. 0.0
<b>Massachusetts.</b>		Oswego	5 8.0	Weston	4
Boston	4	Plattsburg	6	<b>Wisconsin.</b>	
Concord	5	Rochester	4 5.0	Ashland	9
Nantucket	T. 0.0	Saranac Lake	5	Eau Claire	4
<b>Michigan.</b>		Shoreville	6	Grand Rapids	3 6.5
Alpena	4 7.0	Southampton	2	Green Bay	T. 1
Ann Arbor	4	Syracuse	4	Harvey	1
Battle Creek	4	Wedgewood	3	La Crosse	1 6.0
Big Rapids	T.	<b>North Carolina.</b>		Madison	1
Carsonville	2 1.0	Asheville	T.	Medford	3
Escanaba	1 2.5	Hatteras	T. 0.0	New London	2
Grand Haven	T. 0.0	Manteo	T. 0.0	Portage	3
Grand Rapids	1	<b>North Dakota.</b>		Stevens Point	2
Hillsdale	4	Bismarck	4 22.0	Viroqua	2
<b>Minnesota.</b>		Devils Lake	6 15.0	<b>Wyoming.</b>	
<b>Mississippi.</b>		Williston	6	Yellowstone Park	1
<b>Missouri.</b>		<b>Ohio.</b>			
<b>Montana.</b>		Bangorville	6		
<b>Nebraska.</b>		Cadiz	9		

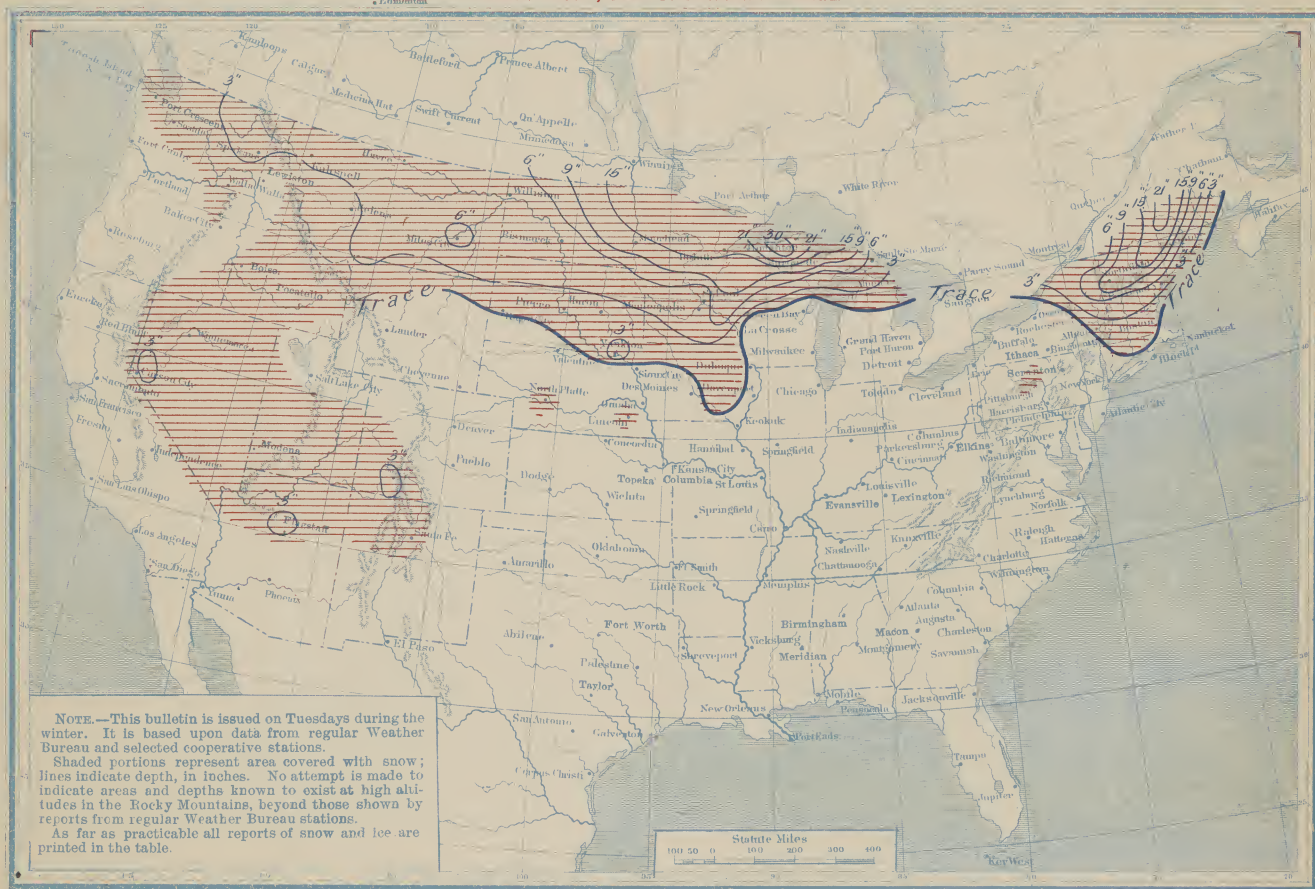
+ Shore ice. \* Floating ice. T. indicates trace.



# SNOW AND ICE BULLETIN.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., January 2, 1907.

## DEPTH OF SNOW.

The northern portions of New England and the upper Lake region are the only districts east of the Mississippi Valley that were covered with snow at 8 p. m., December 31, 1906, the snow reported on December 24 having entirely disappeared during the week from the lower Lake region and the southern portion of the upper Lake region. Slightly increased depths, however, were reported from the interior of northern New England and in Minnesota and the eastern portions of the Dakotas. A large area in the Plateau regions and a part of the extreme north Pacific coast region that were free from snow on December 24, 1906, were covered to depths ranging from a trace to 4 inches on December 31.

The area covered with snow at 8 p. m., December 31, 1906, was much smaller than at the corresponding date of the preceding year, but the depths were greater in portions of New England and in the region extending from western Lake Superior to central Montana.

## ICE IN RIVERS, HARBORS, ETC.

On December 31, 1906, ice in the Missouri River ranged from 3 inches at Sioux City Iowa, to 27 inches at Bismarck, N. Dak.; in the upper Mississippi River, from 3.5 inches at Dubuque, Iowa, to 10 inches at St. Paul, Minn.; and in the rivers of New England, generally from 7 to 17 inches.

Under the comparatively mild temperatures of the week ending December 31, 1906, considerable ice disappeared in the Lake region and the northern portion of the Middle Atlantic States. A slight increase, as compared with the reports of the previous week (December 24, 1906), is indicated in the rivers of northern New England and in the upper Mississippi and upper Missouri rivers.

The following special reports have been received by telegraph:

Gardiner, Me., December 31.—Ice harvesting commenced at one house above Gardiner on the 26th. Mild weather during the past week has been unfavorable for the ice crop.

Leviston, Me., December 31.—Ice harvesting commenced to-day on the Androscoggin River.

Albany, N. Y., January 1.—In the Mohawk Valley only traces of snow remain. In the Hudson Valley it ranges from a trace at Albany to 4 inches in depth at Corinth. The ice in the Hudson averages 8 inches in thickness and in the Mohawk 12 inches.

Alpena, Mich., December 31.—The ice was forced out of Thunder Bay on the 27th. There are small ice banks along the shore and some floating ice outside Middle Island.

La Salle, Ill., January 1.—There is heavy floating ice in the Illinois River at this point.

Omaha, Nebr., December 31.—The river is gorged above the city, but is open along the city front. There is no running ice.

Sioux City, Iowa, January 1.—Shore ice extends from 20 to 35 feet along each side of the river here.

In the rivers of New England, the upper Mississippi River, and at the more northerly stations on the upper Missouri, there was more ice on December 31, 1906, than at the corresponding date of the previous year. In the Lake region the conditions differed but slightly.

JAMES BERRY, Chief of Climatological Division.

## DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., DECEMBER 31, 1906.

Stations.		Stations.		Stations.	
Snow.	Ice in harbors, rivers, etc.	Snow.	Ice in harbors, rivers, etc.	Snow.	Ice in harbors, rivers, etc.
Arizona.	Inches	Michigan—Cont'd.	Inches	New York—Cont'd.	Inches
Flagstaff.	3	Grand Marais.	18	Cooperstown.	T.
Colorado.		Houghton.	17 8.5	Malone.	4
Durango.	4	Humboldt.	34	Ogdensburg.	4
Grand Junction.	T.	Mackinaw City.	3	Oswego.	7.5
Connecticut.		Mancelona.	2	Saranac Lake.	8
Hartford.	T. 4.0	Marquette.	16 0.0	North Dakota.	
West Simsbury.	T.	Sault Ste. Marie.	4 3.0	Bismarck.	3 27.0
Idaho.		Minnesota.		Devils Lake.	14
Boise.	1	Bird Island.	2	Williston.	5 24.0
Pocatello.	T.	Duluth.	16 16.0	Ohio.	
Illinois.		Faribault.	4	Sandusky.	4.5
Ashtab.	T.	Grand Meadow.	3	Oregon.	
La Salle.	†	Hickley.	12	Baker City.	T.
Iowa.		Milan.	3	Roseburg.	T.
Albia.	T.	Minneapolis.	5	Pennsylvania.	
Charles City.	2	Moorhead.	14 19.0	Pittsburg.	†
Davenport.	5	New London.	5	Sellins Grove.	2
Des Moines.	4.0	St. Paul.	4 10.0	South Dakota.	
Dubuque.	T. 3.5	Wabasha.	7	Huron.	1 13.0
Estherville.	†	Wisconsin.		Pierre.	1 6.0
Forest City.	T.	Hannibal.	†	Rapid City.	T.
Iowa City.	1	Montana.		Yankton.	3 8.0
Sioux City.	3.0	Havre.	5	Utah.	
Maine.		Helena.	2	Modena.	2
Bangor.	7 11.5	Kalspell.	4	Vermont.	
Cornish.	19	Miles City.	6	Brattleboro.	4 13.0
Eastport.	17 0	Nebraska.		Burlington.	3
Gardiner.	12 12.0	Lincoln.	T.	Northfield.	10
Lewiston.	15 9.5	North Platte.	1	Washington.	
Millinocket.	26	Nevada.		Seattle.	T.
Orono.	12	Reno.	4	Spokane.	4
Portland.	6	Tonopah.	2	Tacoma.	1
Massachusetts.		Winnemucca.	2	Tatoosh Island.	T.
Adams.	1	New Hampshire.	11	Walla Walla.	2
Amherst.	1	Bethlehem.	5 7.5	Wisconsin.	
Concord.	2	Keene.	4	Ashland.	9
Fitchburg.	1	New Mexico.		Eau Claire.	6
Mansfield.	T.	Santa Fe.	T.	Green Bay.	5.5
Michigan.		New York.		La Crosse.	7.5
Alpena.	1	Albany.	T. 6.5	New London.	T.
Cadumet.	27	Buffalo.	*	Stevens Point.	2
Chatham.	13	Canton.	5	Wyoming.	
Escanaba.	4 4.0			Yellowstone Park.	4

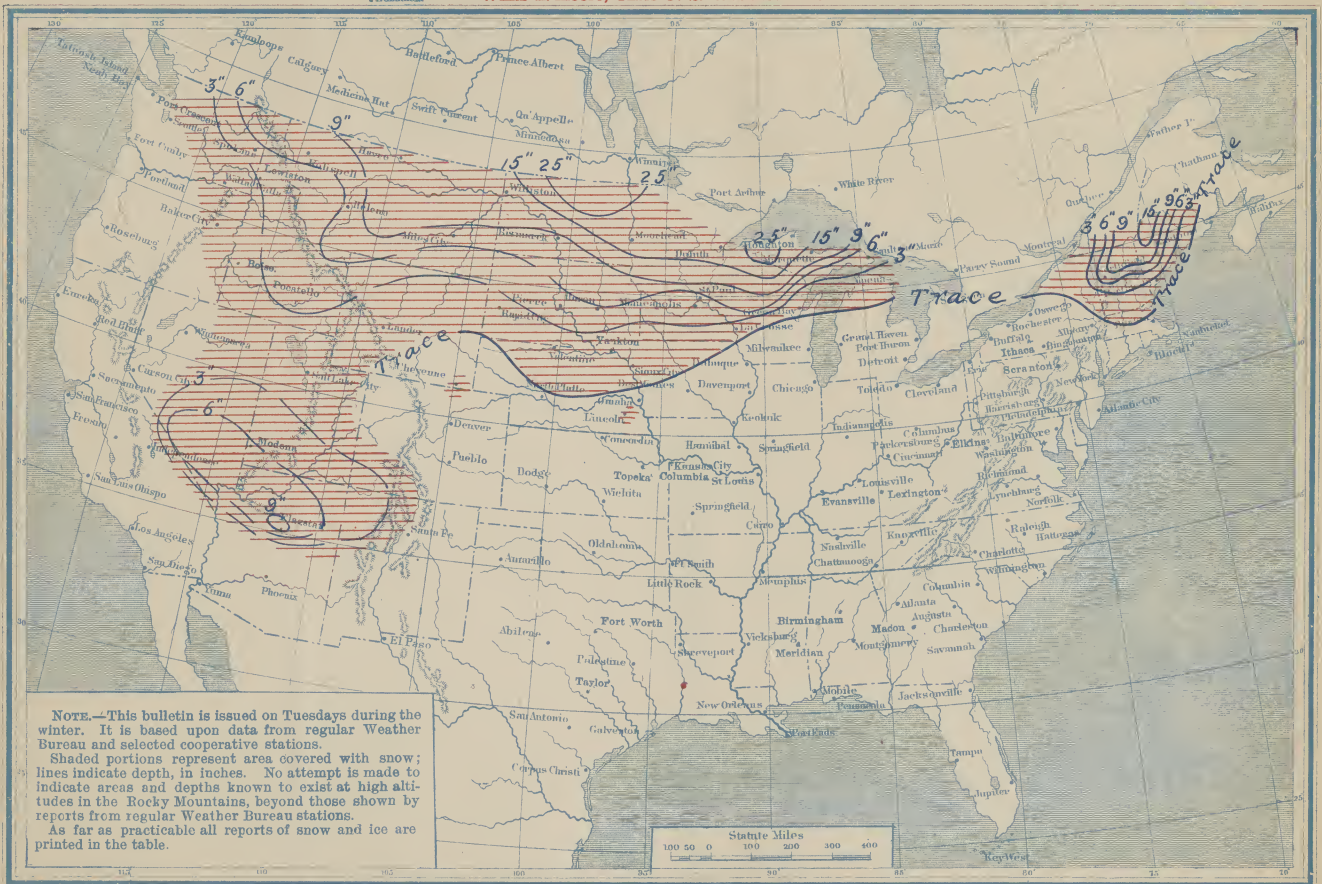
\* Shore ice. † Floating ice. T. indicates trace.



# SNOW AND ICE BULLETIN.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., January 8, 1907.

## DEPTH OF SNOW.

The area covered with snow at 8 p. m., January 7, 1907, was much the same as on December 31, 1906, New England and the northern portion of the upper Lake region being the only districts eastward of the upper Mississippi Valley that were covered. Westward of the Mississippi Valley the southern limit of snow extended somewhat farther south than on the 31st ultimo and increased depths as compared with measurements on that date are reported from the southern Plateau and northern Rocky Mountain regions and in the upper Missouri and Red River of the North valleys. In the two last mentioned districts the depths on January 7 ranged from 8 to 26 inches, from 6 to 9 inches being reported from the southern Plateau and from 3 to 14 inches from the northern Rocky Mountain region. In the interior of northern New England the depths generally ranged from 9 to 15 inches, or from 3 to 10 inches less than on December 31.

At the corresponding date of 1906 the whole of the Lake region and a large part of the central valleys, now free from snow, were covered, but there is now more snow in the southern Plateau and northern Rocky Mountain regions, upper Missouri and Red River of the North valleys, and northern New England than there was at this date in 1906.

## ICE IN RIVERS, HARBORS, ETC.

In the Missouri River, from Yankton, S. Dak., northward, the ice ranged from 10 to 31 inches in thickness at 8 p. m., January 7, 1907, being from 1 inch to 4 inches more than there was on December 31, 1906. From Sioux City, Iowa, a thickness of 3 inches is reported, no change having occurred since the report of the previous week, but at Omaha, Nebr., altho the river continues open along the city front, a thickness of 5 inches is reported. In the upper Mississippi, from Dubuque, Iowa, to St. Paul, Minn., ice ranged from 3 to 12 inches in thickness, a slight increase being reported from the upper stations and a slight decrease at Dubuque. A slight increase is also reported from stations in the upper Michigan Peninsula, but under the mild temperatures of the week ice has disappeared at all stations along the lower Lakes, as well as at many in the southern portion of the upper Lake region. There is a general diminution in the thickness of ice reported from New England rivers, except in Maine, where there has been little or no change.

The following special reports have been received by telegraph:

*Gardiner, Me., January 7.*—The mild weather has been unfavorable for the ice crop. A small amount of thin ice is being housed from lakes, but nothing can be done on running water.

*Concord, N. H., January 8.*—Ice is 11 inches thick on lakes in this vicinity.

*Brattleboro, Vt., January 7.*—Ice on the river has broken up.

*Albany, N. Y., January 8.*—No snow remains in the Mohawk Valley. In the Hudson Valley the depth ranges from 1 inch at Glens Falls to 3 inches at Corinth. The ice has moved out of the Hudson River from Troy southward to Coxsack; no ice remains in the Mohawk River.

*Green Bay, Wis., January 7.*—There is slush ice at this point.

*Duluth, Minn., January 7.*—There is an ice pack a mile wide in the Lake against Minnesota Point, but Duluth entry remains open.

*Dubuque, Iowa, January 7.*—The river is open in places here.

*Omaha, Nebr., January 7.*—The river is closed here, with the exception of an open channel along the city front.

*Sioux City, Iowa, January 8.*—Shore ice extends only a few feet farther from the banks of the river than it did last week.

As compared with the corresponding date of 1906, there is now more ice in the upper Mississippi River and at some stations on the upper Missouri, but in the Lake region and most of the rivers of New England there is less.

JAMES BERRY, Chief of Climatological Division.

## DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., JANUARY 7, 1907.

Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
Arizona.	Inches	Inches	Minnesota.	Inches	Inches	N. Dak.—Cont'd.	Inches	Inches
Flagstaff.	9		Bird Island.	1		Devils Lake.	26	
Colorado.			Duluth.	18	17.0	Williston.	11	25.0
Durango.	4		Farmington.	2		Oregon.		
Idaho.			Grand Meadow.	2		Baker City.	T.	
Boise.	1		Hinckley.	14		South Dakota.		
Lewiston.	1	0.0	Minneapolis.	4		Huron.	6	16.0
Pocatello.	3	0.0	Moorhead.	18	22.0	Pierre.	4	10.0
Iowa.			Mora.	13		Rapid City.	T.	
Carroll.	T.		New London.	5		Yankton.	1	12.0
Charles City.	T.		St. Paul.	2	12.0	Utah.		
Dubuque.	3.0		Wabasha.	5		Modena.	6	
Sioux City.	T.	3.0	Montana.			Salt Lake City.	T.	
Maine.			Hayre.	14		Vermont.		
Bangor.	4	13.0	Helena.	5		Brattleboro.	2	0.0
Buckfield.	14		Miles City.	7		Burlington.	T.	0.0
Cornish.	12		Nebraska.			Northfield.	9	0.0
Eastport.	17.0		Lincoln.	T.		St. Johnsbury.	9	
Gardiner.	8	9.0	North Platte.	T.		Washington.		
Lewiston.	13	10.0	Omaha.	T.	0.5	Seattle.	1	
Millinocket.	16		Valentine.	T.		Spokane.	6	
Orono.	7		Nevada.			Walla Walla.	1	
Portland.	2	0.0	Tonopah.	8		Wisconsin.		
Massachusetts.			New Hampshire.			Ashland.	12	
North Adams.	1		Bethlehem.	4		Eau Claire.	8	
Michigan.			Concord.	2	1.0	Green Bay.	T.	2.0
Alpena.	T.	0.0	Durham.	3		Grand Rapids.	4	
Calumet.	24		Groveton.	11		Koepnick.	15	
Chatham.	15		Keene.	1		La Crosse.	1	10.0
Escanaba.	3	5.0	New Mexico.			Medford.	9	
Grand Marais.	14		Santa Fe.	T.		Stevens Point.	4	
Houghton.	15	10.0	New York.			Viroqua.	1	
Iron River.	30		Canton.	T.		Wausau.	6	
Mancelona.	2	0.0	Ogdensburg.	1		Wyoming.		
Marquette.	13	0.0	North Dakota.			Cheyenne.	T.	
Sault Ste. Marie.	4	3.0	Bismarck.	8	31.0	Lander.	T.	
						Yellowstone Park.	8	

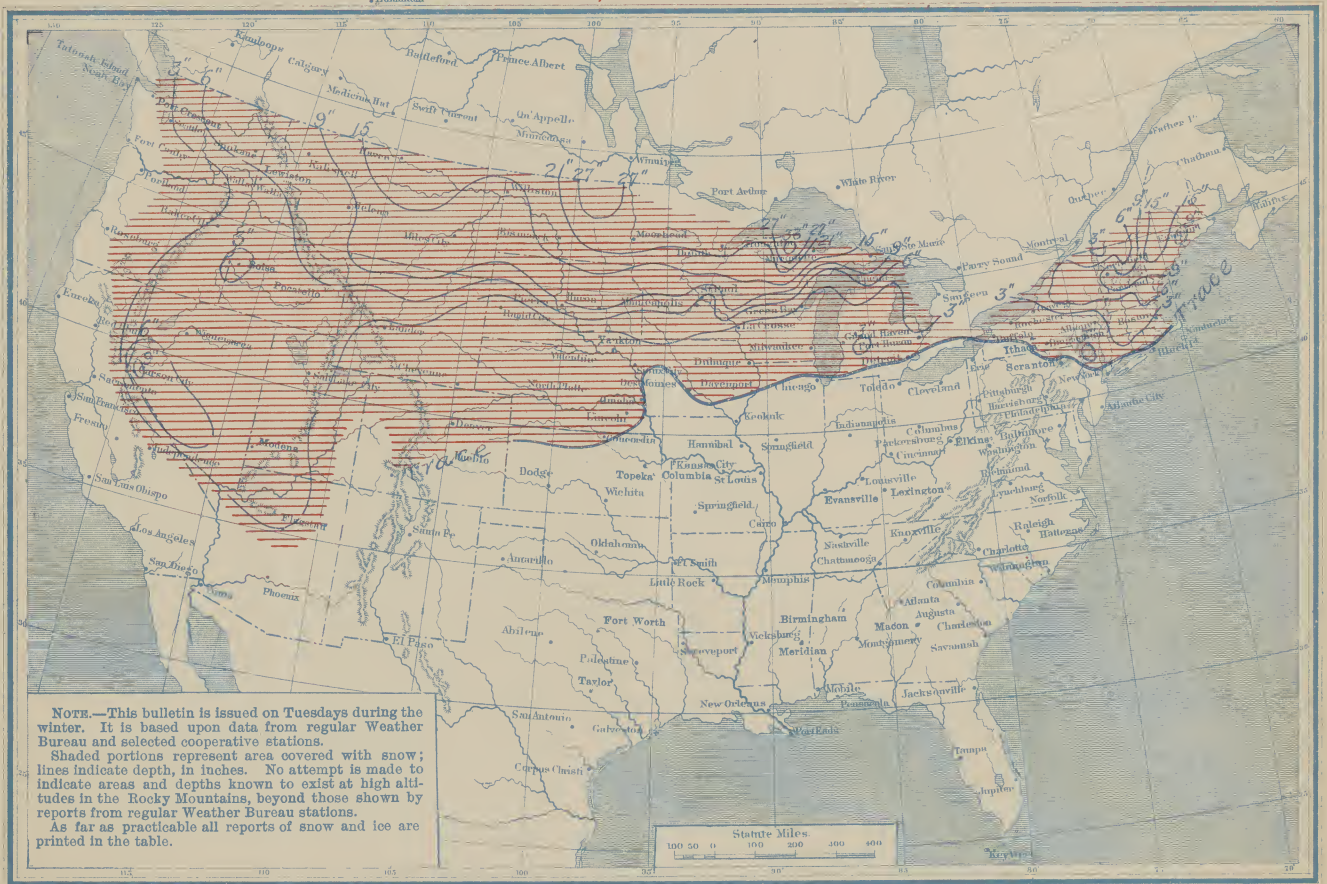
T. indicates trace.



# SNOW AND ICE BULLETIN.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., January 15, 1907.

## DEPTH OF SNOW.

Eastward of the Rocky Mountains the southern limit of snow at 8 p. m., January 14, 1907, was from 50 to 150 miles farther south than at the same hour on the 7th instant, except in the central Missouri Valley, where there was no material difference. In the southern Plateau region somewhat diminished depths were reported. There has been a general increase in the depth of snow in the middle and northern Plateau and Rocky Mountain regions and in the northern districts to the eastward. In the eastern portions of the Dakotas and in Minnesota, northern Wisconsin, the Upper Michigan Peninsula, and northern New England the increase in the depths ranged from 3 to 10 inches or more. The lower Missouri, central Mississippi, and Ohio valleys and the greater part of the Middle Atlantic States continued free from snow. The greatest depths are shown over the Upper Michigan Peninsula and northern New England.

At the corresponding date of 1906 there was somewhat more snow than at this time in the middle Plateau region, upper Mississippi Valley, and portions of the upper Lake region, and there were traces of snow in the upper Ohio Valley and portions of the Middle Atlantic States, where there is now none, but there is now more snow than there was at this time last year in northern New England and from the upper Lake region westward to Idaho.

## ICE IN RIVERS, HARBORS, ETC.

Except in the upper Missouri Valley and over the western end of Lake Superior, the mean temperature of the past week in the northern districts eastward of the Rocky Mountains was above the normal, the week being very mild in the Lake region, central Mississippi and Ohio valleys, and over the northern portion of the Middle Atlantic States. The coldest days were the 8th and 9th, in the upper Mississippi Valley and over western Lake Superior; the 10th, in the central Mississippi and Ohio valleys, lower Lake region, and New England; and the 10th and 11th, over the southern portion of the Middle Atlantic States. While the formation of ice was less than usual, the measurements, as compared with those of the preceding week, January 7, 1907, show a general increase. In the upper Missouri ice now ranges from 4 to 32 inches, or from 0 inch to 4 inches more than in the previous week; in the upper Mississippi from La Crosse, Wis., to St. Paul, Minn., from 12 to 14 inches, a slight increase over the previous week; at stations in the upper Lake region, from 2 to 20 inches, an increase ranging from 2 to 7 inches; in the rivers of northern New England, from 2 to 17 inches, or an increase ranging from 2 to 4 inches.

The following special reports have been received by telegraph:

**Gardiner, Me., January 14.**—The ice harvest commenced this morning in all sections in Maine, with favorable weather. The crop will be of the finest quality.

**Concord, N. H., January 14.**—The ice is 12 to 15 inches thick on lakes in this vicinity and cutting has commenced.

**Albany, N. Y., January 15.**—In the Mohawk Valley the snow averages 2 inches in depth; in the Hudson Valley the depth ranges from 1 inch at Athens to 8 inches at Corinth. There is only floating ice in the Mohawk and Hudson rivers.

**Duluth, Minn., January 14.**—Harbor ice ranges from 18 to 22 inches in thickness. There is considerable thin ice in the lake.

**Hannibal, Mo., January 14.**—There is a little floating ice in the river here.

**Kansas City, Mo., January 14.**—There is light floating ice in the river at this point.

**Omaha, Nebr., January 14.**—The river continues closed here, altho there are some open places in the channel.

**Sioux City, Iowa, January 15.**—Shore ice extends 40 feet from the banks of the river here.

There is now decidedly more ice in the upper Missouri and upper Mississippi and in northern New England than there was at the corresponding date of 1906, but in the Lake region and southern New England there is now generally less.

JAMES BERRY, Chief of Climatological Division.

## DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., JANUARY 14, 1907.

Stations.		Stations.		Stations.	
Snow.	Ice in rivers, harbors, etc.	Snow.	Ice in rivers, harbors, etc.	Snow.	Ice in rivers, harbors, etc.
<b>Arizona.</b>					
Flagstaff	5	<b>Michigan—Cont'd.</b>		<b>New York—Cont'd.</b>	
<b>Colorado.</b>		Grand Rapids	29	Oswego	1 0.0
Denver	T.	Houghton	23 13.0	Plattsburg	3
Durango	T.	Humboldt	35	Port Jervis	3
Pueblo	T.	Lansing	T.	Poughkeepsie	2
<b>Connecticut.</b>		Ludington	T.	Rochester	T. 0.0
Hartford	2 0.0	Mancelona	4	Rome	2
West Simsbury	3	Marquette	20 0.0	Saranac Lake	6
<b>Idaho.</b>		Port Huron	1 1.0	Syracuse	T.
Boise	T.	Sault Ste. Marie	14 10.5	<b>North Dakota.</b>	
Leviaston	3 0.0	South Haven	1	Bismarck	16 32.0
Pocatello	5 4.0	<b>Minnesota.</b>		Devils Lake	28
<b>Illinois.</b>		Bird Island	4	Williston	12 25.0
Ashton	2	Duluth	23 20.0	<b>Oregon.</b>	
Winnebago	1	Faribault	5	Baker City	3
<b>Iowa.</b>		Farmington	5	Roseburg	T.
Albia	T.	Grand Meadow	3	<b>Pennsylvania.</b>	
Atlantic	1	Hinckley	20	South Eaton	T.
Charles City	T.	Milan	9	Towanda	T.
Davenport	7	Minneapolis	22 24.0	<b>Rhode Island.</b>	
Des Moines	T. 7.0	Moorehead	13	Kingston	T.
Dubuque	T. 0.0	Morris	13	Providence	2 0.0
Estherville	2	New London	12	<b>South Dakota.</b>	
Iowa City	T.	St. Paul	4 14.0	Huron	11 17.0
Sioux City	4.0	Wabasha	7	Pierre	9 14.0
<b>Kansas.</b>		Worthington	3	Rapid City	1
Concordia	T.	<b>Missouri.</b>		Yankton	1 13.5
Cottonwood Falls	T.	Hannibal	†	<b>Utah.</b>	
Dodge	T.	Kansas City	†	Modena	5
Dresden	T.	<b>Montana.</b>		Salt Lake City	4
Ellinwood	T.	Havre	19	<b>Vermont.</b>	
Wakeeney	T.	Helena	7	Brattleboro	5 2.0
<b>Maine.</b>		Kalispell	8	Burlington	2 0.0
Bangor	8 15.0	Miles City	10	Northfield	12
Buckfield	19	<b>Nebraska.</b>		St. Johnsbury	14
Cornish	15	Lincoln	1	<b>Washington.</b>	
Eastport	11 17.0	North Platte	T.	Seattle	6
Gardiner	12 13.0	Omaha	1 8.0	Spokane	6
Leviaston	16 13.0	Valentine	1	Tacoma	T.
Millinocket	20	<b>Nevada.</b>		Walla Walla	1
Orono	11	Reno	9	<b>Wisconsin.</b>	
Portland	9 0.0	Tonopah	8	Ashland	17
<b>Massachusetts.</b>		Winnemucca	3	Eau Claire	11
Adams	3	<b>New Hampshire.</b>		Green Bay	1 6.0
Amherst	3	Bethlehem	5	Harvey	1
Concord	2	Concord	5 4.0	Koepenick	18
Fitchburg	5	Durham	6	La Crosse	1 12.0
Mansfield	4	Hanover	3	Medford	11
North Adams	3	Keene	8	Milwaukee	T. 0.0
<b>Michigan.</b>		<b>New Jersey.</b>		Mount Horeb	T.
Alpena	1 2.0	Charlotteburg	1	New London	2
Battle Creek	T.	<b>New York.</b>		Portage	1
Big Rapids	33	Albany	1 0.0	Racine	T.
Calumet	3	Beaver River	3	Sheboygan	T.
Carsonville	3	Binghamton	T.	Stevens Point	3
Detroit	T. 0.0	Canton	5	Viroqua	1
Escanaba	5 11.0	Do Ruyter	T.	Wausau	2
Grand Haven	1 0.0	Le Roy	T.	<b>Wyoming.</b>	
Grand Marais	20	Malone	6	Cheyenne	T.
		Ogdensburg	10	Lander	2
				Yellowstone Park	12

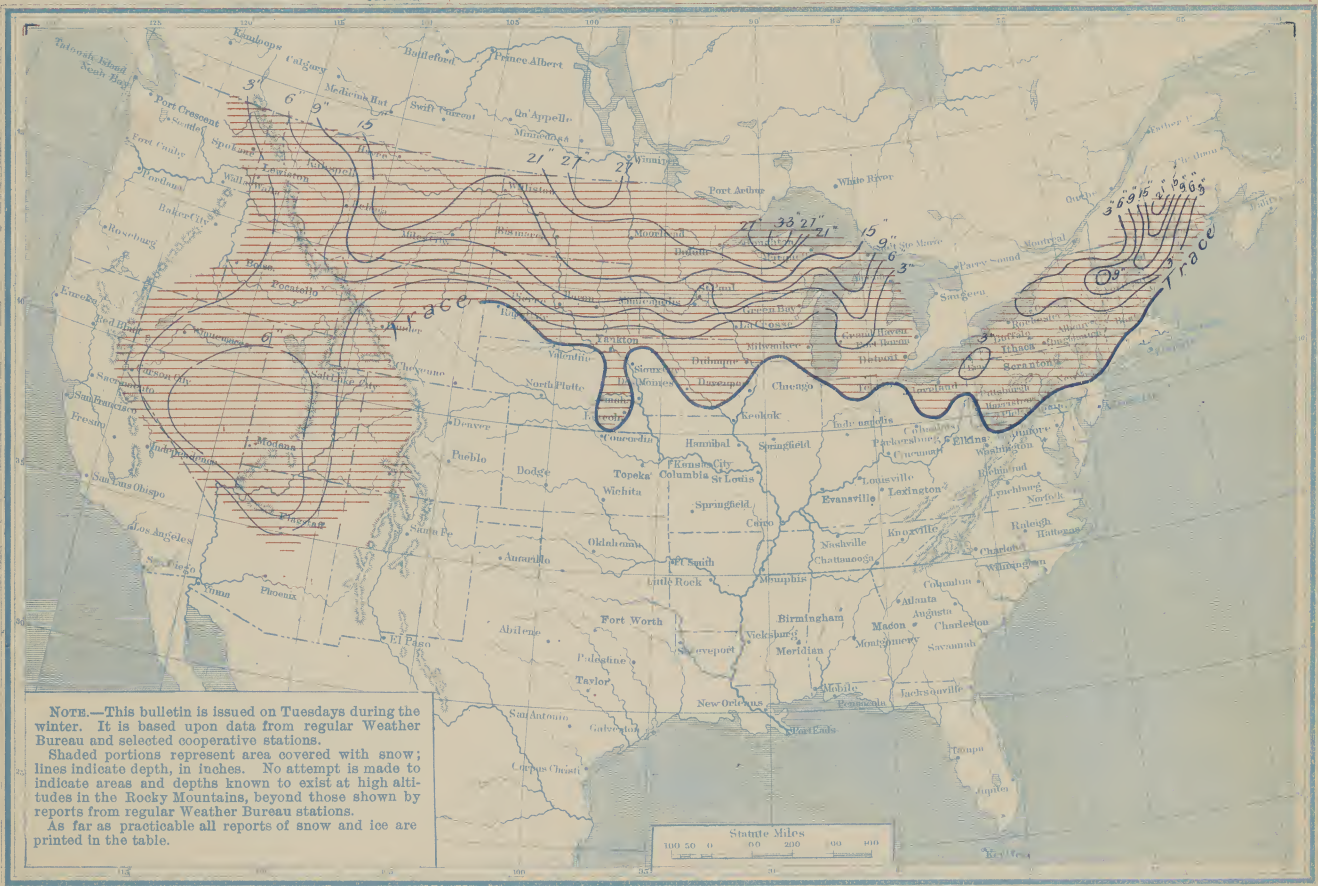
† Floating ice. T. indicates trace.



U. S. DEPARTMENT OF AGRICULTURE,  
WEATHER BUREAU.  
SNOW AND ICE BULLETIN.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., January 22, 1907.

DEPTH OF SNOW.

In northern New England and the extreme northern districts from the upper Lake region westward to Idaho the depth of snow continues from 6 inches to 2 feet, or more, the greatest depths occurring in eastern Montana, North Dakota, northern Minnesota, the Upper Michigan Peninsula, and northern Maine, where they generally exceed 15 inches, reaching 36 inches in the central portion of the Upper Michigan Peninsula. In the central valleys the southern limit of snow is practically the same as on the 14th instant; to the eastward it extends from 50 to 200 miles farther south, while over the middle Rocky Mountain slope it has receded northward about 300 miles. Diminished depths, as compared with those reported on the 14th instant, are shown in New England and over the eastern portion of the north Pacific coast region, but from the lower Lake region westward to the upper Mississippi Valley and over the southern Plateau region a slight increase is generally indicated.

As a whole, there is now more snow than there was at the corresponding date of 1906. Some stations, however, in the Lake region, upper Mississippi Valley, and Plateau regions show less.

ICE IN RIVERS, HARBORS, ETC.

The mean temperature during the week ending January 21, 1907, was considerably above the normal in the Middle Atlantic States and lower Lake region, and in these districts little or no ice formed. While the temperature in New England and most of the upper Lake region was slightly above the normal, still the mean for the week generally ranged from 5° to 12° below freezing, and under the influence of these temperatures the increase in ice formation was material. Over the western end of Lake Superior and the northern portions of the upper Mississippi and Missouri valleys the week averaged colder than usual, and the increase in the thickness of ice in these districts was more pronounced. The 15th and 16th were the coldest days in the upper Lake region and to the westward; the 16th and 17th in the lower Lake region, and the 17th and 18th in the Middle Atlantic States and New England. The period from the 19th to the 21st was decidedly mild. In the upper Missouri River ice now ranges from 5 inches at Sioux City, Iowa, to 34 inches at Bismarck, N. Dak., the river being frozen southward to Omaha, Nebr., where ice is 12 inches thick, but open at Kansas City; in the upper Mississippi ice ranges from 11 inches at Dubuque, Iowa, to 16 inches at St. Paul, Minn., with floating ice at Davenport, Iowa, and Hannibal, Mo.; and in the rivers of New England ice ranges from 6 to 19 inches.

The following special reports have been received by telegraph:

**Gardiner, Me., January 21.**—The weather is favorable for the ice crop. Concord, N. H., January 21.—The ice is from 15 to 18 inches thick on lakes in this vicinity and cutting is in progress.  
**Albany, N. Y., January 22.**—In the Mohawk Valley there are traces of snow; in the Hudson Valley the depth ranges from trace at Athens to 5 inches at Corinth. Ice in the Hudson River ranges from 1 inch in thickness at Athens to 10 inches at Corinth; the Mohawk River is mostly open.  
**Duluth, Minn., January 21.**—The harbor has a solid covering of ice, ranging in thickness from 10 to 25 inches. The lake ice field extends 15 miles. The snow is from 2 to 6 feet deep in the woods.  
**Davenport, Iowa, January 21.**—There is some floating ice in the river.  
**Hannibal, Mo., January 21.**—The river is full of heavy floating ice.  
**Omaha, Nebr., January 21.**—The river continues closed; there are some open places in the channel.  
**Sioux City, Iowa, January 22.**—Shore ice, covered with water, extends 25 feet from the banks of the river.  
**Yankton, S. Dak., January 21.**—The are pools of standing water above the ice.

The following special report has been received by mail from the St. Lawrence River Ice Company:

**Cape Vincent, N. Y., January 18.**—The St. Lawrence River closed at this point on January 12. There are now 7 inches of ice of the finest quality, and the harvest will commence about January 23. There are about 2 inches of snow.

As compared with the same date of 1906, there is, as a whole, more ice in the extreme northern districts, except in southern New England, where there is somewhat less.

JAMES BERRY, Chief of Climatological Division.

DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., JANUARY 21, 1907.

Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
Arizona.	Inches	Inches	Michigan—Cont'd.	Inches	Inches	New York—Cont'd.	Inches	Inches
Flagstaff	8		Saginaw			Saratoga Lake	4	
Colorado.			Sault Ste. Marie	14	14.0	Shortsville	2	
Durango	T.		South Haven	T.		Syracuse	1	
Grand Junction	T.		Minnesota.			Wedgewood	T.	
Connecticut.			Alexandria	14		North Dakota.		
Hartford	T.	0.0	Beaver Bay	24		Bismarck	16	34.0
Idaho.			Bird Island	4		Devils Lake	28	
Boise	T.		Duluth	24	22.0	Williston	13	26.0
Pocatello	5	5.0	Farmington	4		Ohio.		
Illinois.			Grand Meadow	4		Bangorville	T.	
Ashton	T.		Hallock	21		Cleveland	1	0.0
Chicago	T.		Millan	10		Philo	T.	
Minonk	T.		Minneapolis	9		Sandusky	T.	0.5
Peoria	1.0		Moorhead	19	30.0	Tiffin	T.	
Winnebago	T.		Morris	15		Toledo	T.	0.0
Indiana.			New London	14		Wauson	T.	
Auburn	T.		Wabasha	4	16.0	Pennsylvania.		
Marion	T.		Worthington	2		Claysville	T.	
Syracuse	T.		Missouri.			Erie	1	0.0
Iowa.			Hannibal	†		Harrisburg	T.	0.0
Albia	1		Maryville	1		Mifflintown	1	
Boone	T.		Trenton	1		Pittsburg	T.	0.0
Carroll	T.		Montana.			Saegerstown	3	
Charles City	1		Havre	19		Seranton	T.	
Davenport	T.		Kalispell	4		Selins Grove	2	
Des Moines	1	8.5	Miles City	10		Towanda	T.	
Dubuque	1	11.0	Nebraska.			Williamsport	2	
Iowa City	1		Lincoln	T.		South Dakota.		
Sioux City	5.0		Omaha	T.	12.0	Huron	11	18.5
Waterloo	2		Valentine	T.		Pierre	8	17.0
Kansas.			Nevada.			Rapid City	T.	
Concordia	T.		Reno	2		Yankton	T.	18.0
Maine.			Tonopah	8		Utah.		
Bangor	4	17.5	Winnemucca	3		Modena	8	
Buckfield	14		Gardiner	10	14.0	Salt Lake City	7	
Eastport	T.	19.0	Lewiston	17	15.0	Tenn.		
Gardiner	10	14.0	Millinocket	24		Brattleboro	4	6.0
Lewiston	17	15.0	Orono	10		Burlington	T.	0.0
Millinocket	24		Portland	6	0.0	Northfield	9	
Orono	10		Maryland.			Washington.		
Portland	6	0.0	Fallston	T.		Spokane	3	
Maryland.			Massachusetts.			West Virginia.		
Fallston	T.		Amherst	T.		Romney	T.	
Massachusetts.			Fitchburg	T.		Wisconsin.		
Amherst	T.		North Adams	1		Ashland	20	
Fitchburg	T.		Michigan.			Eau Claire	10	
North Adams	1		Alpena	T.	1.5	Grand Rapids	4	
Michigan.			Ann Arbor	1		Green Bay	3	8.0
Alpena	T.	1.5	Battle Creek	1		Harvey	1	
Ann Arbor	1		Big Rapids	36		Kooplenok	18	
Battle Creek	1		Detroit	1	0.0	La Crosse	2	14.0
Big Rapids	36		Escanaba	6	16.0	Madison	2	
Calumet	1	0.0	Grand Haven	5	0.0	Medford	12	
Detroit	1	0.0	Grand Marais	18		Mount Horeb	2	0.0
Escanaba	6	16.0	Grand Rapids	3		Portage	3	
Grand Haven	5	0.0	Houghton	34	13.0	Stevens Point	3	
Grand Marais	18		Humboldt	35		Viroqua	2	
Grand Rapids	3		Lansing	12		Washburn	22	12.0
Houghton	34	13.0	Manitou	12		Wausau	10	
Humboldt	35		Marquette	18	0.5	Wyoming.		
Lansing	12		Port Huron	T.	0.5	Lander	T.	
Manitou	12					Yellowstone Park	13	
Marquette	18	0.5						
Port Huron	T.	0.5						

\* Shore ice.

† Floating ice.

T. Indicates trace.



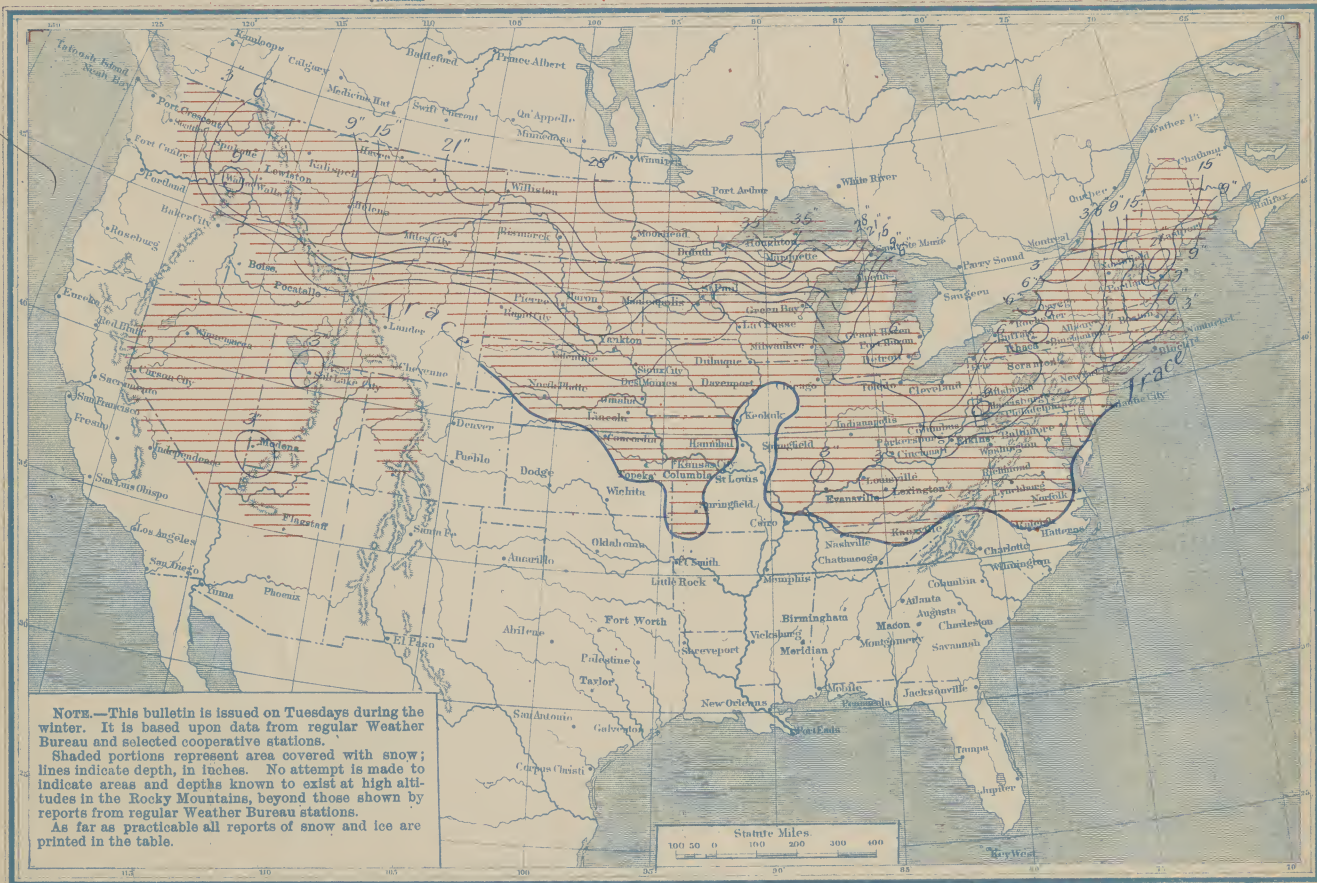
U. S. DEPARTMENT OF AGRICULTURE,  
WEATHER BUREAU.

SNOW AND ICE BULLETIN.

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U. S. Dept of Agriculture

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

Willis L. Moore, Chief U. S. Weather Bureau.



NOTE.—This bulletin is issued on Tuesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations. Shaded portions represent area covered with snow; lines indicate depth, in inches. No attempt is made to indicate areas and depths known to exist at high altitudes in the Rocky Mountains, beyond those shown by reports from regular Weather Bureau stations. As far as practicable all reports of snow and ice are printed in the table.

WASHINGTON, D. C., January 29, 1907.

DEPTH OF SNOW.

The central Missouri and Ohio valleys and a large part of the Middle Atlantic States that were free from snow on the date of the previous reports (21st) were covered at 8 p. m. on the 28th, traces being reported from the central Missouri Valley and depths ranging from 1 inch to more than 3 inches in the Ohio Valley and Middle Atlantic States. Throughout the northern portions of the country greater depths, as compared with those reported on the 21st, are indicated. In New England the increase generally ranges from 3 to 10 inches; in the lower Lake region, from 2 to 5 inches, and in the upper Lake region, from 1 inch to 10 inches. Increased depths are also reported from western North Dakota and in Montana and northern Idaho, but over the middle and southern Plateau regions there has been a decrease ranging from 1 inch to 6 inches. The greatest depths now exist in eastern Montana, North Dakota, northern Minnesota, the upper Michigan Peninsula, and northern New England, where they range from 1 foot to more than 2 feet, a limited area in the central portion of the upper Michigan Peninsula being covered to a depth of more than 3 feet.

The area now covered and the depths existing are greater than at the corresponding period of last year, when the Ohio Valley and the greater part of the Lake region and Middle Atlantic States were practically free from snow.

ICE IN RIVERS, HARBORS, ETC.

The week ending January 28, 1907, especially the latter part, was decidedly cold in the northern districts, the mean temperature being below the normal throughout the week in the Lake region, the northern portion of the Middle Atlantic States, and New England, and above the normal on but one or two days in the upper Mississippi and Missouri valleys. Under these conditions there was a general and decided increase in the formation of ice. In the Missouri River ice now ranges from 5 inches at Kansas City, Mo., to 35 inches at Bismarck, N. Dak., an increase ranging from 1 inch to 6 inches over the measurements of the previous week (21st instant); in the Mississippi, from 14 inches at Dubuque, Iowa, to 19 inches at St. Paul, Minn., an increase of from 2 to 3 inches, with floating ice as far south as Cairo, Ill.; in the rivers of New England, from 7 to 19 inches, an increase of from 1 inch to 7 inches. From 1 inch to 3 inches of ice has formed in the Middle Atlantic States. In the lower Lake region ice generally ranges from 3 to 7 inches, and in the upper Lake region from 6 to 28 inches.

The following special reports have been received by telegraph:

**Gardiner, Me., January 28.**—Owing to the extreme cold and the heavy snow, the ice crop is being housed with much difficulty.  
**Concord, N. H., January 28.**—The ice is from 17 to 20 inches thick on lakes in this vicinity and cutting is in full progress.  
**Albany, N. Y., January 28.**—The snow averages 6 inches in depth in the Mohawk Valley; in the Hudson Valley the depths range from 4 inches at Athens to 12 inches at Corinth. The ice averages 10 inches in thickness in the Hudson River and 7 inches in the Mohawk.  
**Harrisburg, Pa., January 28.**—There is much floating ice in the river.  
**Washington, D. C., January 28.**—There is thin floating ice in the river, and thin ice near the shore.  
**Duluth, Minn., January 28.**—Harbor ice is from 10 to 36 inches thick. The lake ice field extends solid about 28 miles.  
**Davenport, Iowa, January 28.**—There is considerable floating ice in the river.  
**Keokuk, Iowa, January 28.**—There is heavy drift ice in the river. Seven-inch ice is being cut in the canal for home consumption, as it is too light for shipping.  
**Hannibal, Mo., January 28.**—The river is full of heavy floating ice, and shore ice extends out 30 to 40 feet.  
**St. Louis, Mo., January 28.**—The river is full of floating ice.  
**Cairo, Ill., January 28.**—The river is three-fourths full of heavy floating ice.  
**Omaha, Neb., January 28.**—The ice harvest is nearly completed. The river channel continues open in places.  
**Sioux City, Iowa, January 28.**—Shore ice extends 40 feet from the banks of the river.

In all northern districts there is now decidedly more ice than there was at the corresponding date of 1906, the increase ranging from 4 to 11 inches in the upper Missouri River; from 3 to 7 inches at the more northerly stations on the upper Mississippi; from 3 to 14 inches in the upper Lake region; from 3 to 7 inches in the lower Lake region, and from 4 to 10 inches in the rivers of New England.

JAMES BERRY, Chief of Climatological Division.

DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., JANUARY 28, 1907.

Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
Arizona.	Inches	Inches	Michigan—Cont'd.	Inches	Inches	Ohio—Cont'd.	Inches	Inches
Flagstaff.	2		Hillsdale.	3		Cadiz.	8	
Arkansas.			Houghton.	38	15.5	Cincinnati.	2	0.0
Bentonville.	T.		Humboldt.	35		Cleveland.	4	7.5
Colorado.			Lansing.	6		Columbus.	2	7.0
Durango.	T.		Mancelona.	13		Dayton.	1	
Grand Junction.	T.		Marquette.	18	3.5	Garrettsville.	5	
Connecticut.			Onaway.	4		Philo.	7	
Hartford.	6	7.0	Port Huron.	3	5.0	Sandusky.	2	6.5
New Haven.	4		Saginaw.	3		Tiffin.	3	
West Simsbury.	10		Sault Ste. Marie.	16	16.0	Toledo.	3	5.0
Delaware.			South Haven.	4		Wauseon.	3	
Millsboro.	1		Minnesota.			Oregon.		
Newark.	1		Bird Island.	4		Baker City.	T.	
Dist. of Columbia.			Duluth.	28	28.0	Pennsylvania.		
Washington.	T.	†	Faribault.	5		Claysville.	9	
Idaho.			Millan.	8		Easton.	3	
Lowiston.	7	0.0	Moorhead.	25	39.0	Erie.	5	5.5
Pocatello.	T.	0.0	Mora.	19		Harrisburg.	2	†
Illinois.			New London.	14		Philadelphia.	T.	2.0
Chicago.	1		St. Paul.	4	19.0	Pittsburg.	4	†
La Salle.	T.	†	Wabasha.	8		Scranton.	5	
Peoria.	T.	5.0	Missouri.			Selins Grove.	7	7.0
St. John.	2		Columbia.	T.		Skidmore.	6	
Springfield.	T.		Hannibal.	T.	†	State College.	6	
Winnebago.	1		Kansas City.	T.	5.0	Towanda.	5	8.0
Indiana.			St. Louis.	T.	†	Rhode Island.		
Evansville.	2	0.0	Springfield.	T.		Kingston.	1	0.0
Indianapolis.	T.		Montana.			Narragansett.	2	
Princeton.	3		Havre.	17		Providence.	5	0.0
Syracuse.	1		Helena.	8		South Dakota.		
Iowa.			Miles City.	11		Huron.	11	21.0
Charles City.	1		Nebraska.			Pierre.	8	21.0
Davenport.	1	†	Columbus.	1		Rapid City.	T.	
Des Moines.	1	12.0	Lincoln.	1		Yankton.	4	20.5
Dubuque.	1	14.0	North Platte.	1		Florida.		
Keokuk.	†		Omaha.	T.	14.0	Knoxville.	T.	
Sioux City.	5	11.0	Pawnee City.	T.		Memphis.	T.	0.0
Waterloo.	2		Valentine.	2		Nashville.	T.	0.0
Kansas.			Nevada.			Utah.		
Cottonwood Falls.	2		Reno.	1		Modena.	4	
Ottawa.	1		Tonopah.	2		Salt Lake City.	4	
Topeka.	T.		Winnemucca.	2		Vermont.		
Kentucky.			Bethlehem.	8		Brattleboro.	7	12.0
Cattlettsburg.	1		Concord.	11	15.0	St. Johnsbury.	16	
Enbank.	1		Hanover.	11		Virginia.		
Lexington.	5		Keene.	7		Dale Enterprise.	1	
Louisville.	3	0.0	New Jersey.			Fredericksburg.	T.	
St. John.	1		Asbury Park.	1		Lynchburg.	T.	0.0
Williamsburg.	1		Atlantic City.	T.		Mount Weather.	T.	
Maine.			Bridgeton.	1		Norfolk.	1	0.0
Bangor.	12	18.5	Cape May.	T.	2.0	Richmond.	2	2.0
Cornish.	17	†	Flemington.	1		Stephens City.	2	
Eastport.	7	19.0	Newark.	2		Woodstock.	2	
Gardiner.	20	18.0	Phillipsburg.	4		Wytheville.	T.	
Lowiston.	26	17.0	New York.			Washington.		
Orono.	17		Addison.	4		Seattle.	T.	
Portland.	16	5.0	Albany.	4	4.5	Spokane.	6	
Maryland.			Buffalo.	4	5.0	Walla Walla.	9	
Baltimore.	1	3.0	Canton.	1		West Virginia.		
Easton.	1		Chattanooga.	1	5.0	Elkins.	1	1.0
Massachusetts.			Franklinville.	7		Parkersburg.	5	0.0
Adams.	6		Ithaca.	6		Weston.	2	
Boston.	8		New York.	1		Wisconsin.		
Fitchburg.	14		Oswego.	10	5.5	Ashland.	24	
Mansfield.	9		Rochester.	5	3.5	Green Bay.	4	12.5
Nantucket.	T.	0.0	Rome.	3		Koepnick.	20	
Michigan.			Setauket.	2	3.0	La Crosse.	2	16.0
Alpena.	3	6.0	Syracuse.	5		Madison.	1	
Ann Arbor.	6		North Carolina.			Medford.	15	
Battle Creek.	2		Raleigh.	T.		Milwaukee.	2	0.0
Big Rapids.	4		North Dakota.			Shelby.	6	
Calumet.	39		Bismarck.	13	35.0	Stevens Point.	4	
Chatham.	32		Devils Lake.	28		Wausau.	12	
Detroit.	3	7.0	Williston.	25	26.0	Wyoming.		
Escanaba.	9	20.0	Ohio.			Yellowstone Park.	13	
Grand Haven.	6	0.0	Bangorville.	4				
Grand Marais.	28							
Grand Rapids.	4							

\* Shore ice.

† Floating ice.

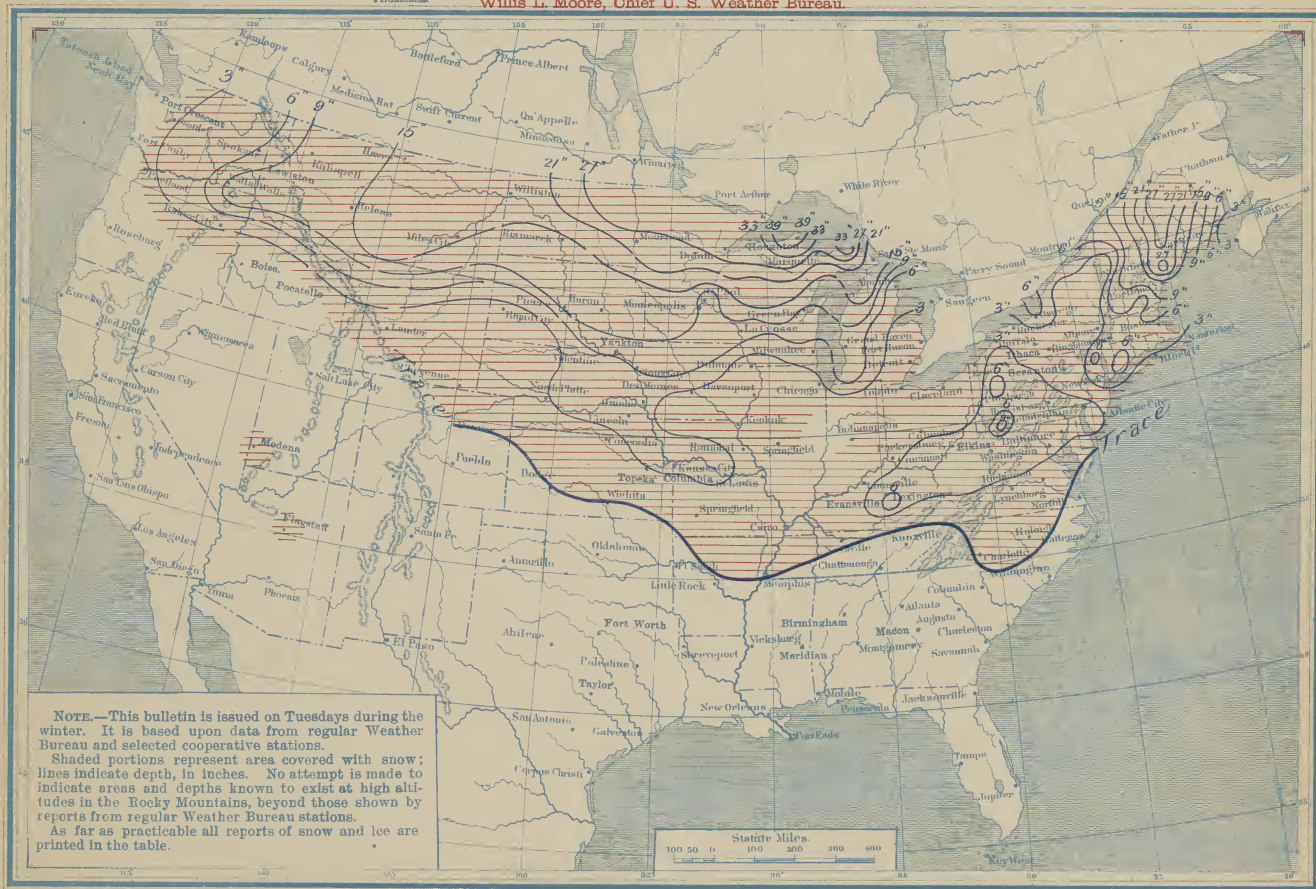
T. indicates trace.



# SNOW AND ICE BULLETIN.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., February 5, 1907.

## DEPTH OF SNOW.

The area covered with snow at 8 p. m., February 4, 1907, was greater than at any previous date of the winter, the southern limit extending from the middle Rocky Mountain region southeastward to northern Arkansas and thru Tennessee and North Carolina to the Virginia coast. Thruout the area extending from northern Idaho eastward to the upper Lake region the ground is now covered to depths generally ranging from 1 foot to more than 3 feet, eastern North Dakota, the northern portions of Minnesota and Wisconsin, and the upper Michigan Peninsula having depths ranging from 2 to more than 3 feet. Only slight depths are reported from the central Mississippi and Ohio valleys and the lower Lake region, but in the interior portions of the Middle Atlantic States the depths generally range from 3 to 12 inches. The southern portion of New England is covered to depths ranging from 3 to 6 inches, while in Maine and the mountain portions of New Hampshire and Vermont the depths range from 1 foot to more than 2 feet.

Diminished depths, as compared with those of January 28, 1907, are reported from the middle and southern Plateau districts, lower Lake region, upper Ohio Valley, and the greater part of New England, but elsewhere within the area covered the depths are greater than were reported on the preceding Monday.

At the corresponding date of 1906 there was somewhat less snow in the Rocky Mountain regions and at some stations in the lower Lake region and central Mississippi Valley, but in the northern and central portions of the country there was more.

## ICE IN RIVERS, HARBORS, ETC.

The daily mean temperature was below freezing in the more northerly districts on all days during the week ending February 4, 1907, except on the 1st and 2d in the Lake region and northern part of the central valleys, and on the 2d and 3d in New England and the northern part of the Middle Atlantic States. It was sufficiently low for the rapid formation of ice in nearly all of the regions named, especially in the Lake region and to the westward, where the temperature deficiency was well marked.

The Missouri River is frozen southward to Kansas City, the ice ranging from 6 inches at that station to 36.5 inches at Bismarck; the Mississippi is frozen southward to Dubuque, the ice ranging from 16 inches at that station to 20 inches at La Crosse and St. Paul, with floating ice from Davenport to St. Louis. At stations on or near the Great Lakes ice generally ranges from 6 inches to more than 20 inches, 29 inches being reported from Duluth Harbor. In the rivers of New England ice generally ranges from 9 to 20 inches.

As compared with the measurements made the preceding Monday (January 28) there is an increase ranging from 2 to 5 inches in the western rivers and at stations on the Great Lakes, and from 1 inch to 3 inches in the rivers of New England. Slightly diminished quantities are shown in portions of the Middle Atlantic States.

The following special reports have been received by telegraph:

**Gardiner, Me., February 4.**—The weather is very favorable for the Maine ice crop, about one-half of which is housed.

**Concord, N. H., February 4.**—Ice is from 14 to 20 inches thick on lakes in this vicinity. Cutting is in full progress and a fine crop is being harvested.

**Albany, N. Y., February 5.**—The snow averages 3 inches in depth in the Mohawk Valley; in the Hudson Valley the depth ranges from 1 inch at Athens to 8 inches at Corinth. The ice averages 11 inches in thickness in the Hudson River and 10 inches in the Mohawk.

**Duluth, Minn., February 4.**—The lake ice field extends solid for at least 30 miles; the thickness is from 10 to 15 inches.

**Keokuk, Iowa, February 4.**—Drift ice in the river is light, giving evidence of a gorge north of this point. Ten-inch ice is being out and shipped from the canal.

**Hannibal, Mo., February 4.**—The river continues full of heavy floating ice, and there is an accumulation of ice along the shore extending out 50 to 75 yards.

**Kansas City, Mo., February 4.**—Ice is gorged below the bridge. There is a plentiful amount in neighboring lakes.

**Sioux City, Iowa, February 4.**—The river is closed below the city. Above the city the shore ice extends 60 feet from the banks.

As compared with the same period of the preceding year there is now much more ice in all northern districts, the increase being greatest in New England.

JAMES BERRY, Chief of Climatological Division.

## DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., FEBRUARY 4, 1907.

Stations.		Stations.		Stations.	
Snow.		Snow.		Snow.	
Inches	Feet	Inches	Feet	Inches	Feet
<b>Arizona.</b>					
Flagstaff	8	<b>Michigan—Cont'd.</b>			
Flagstaff	8	Big Rapids	42	<b>North Dakota.</b>	
Flagstaff	8	Calumet	1	Bismarck	12 36.5
Flagstaff	8	Carsonville	1	Devils Lake	30
Flagstaff	8	Chatham	33	<b>Ohio.</b>	
Flagstaff	8	Chatham	33	Bangorville	2
Flagstaff	8	Chatham	33	Cincinnati	1
Flagstaff	8	Chatham	33	Cleveland	10
Flagstaff	8	Chatham	33	Columbus	7.0
Flagstaff	8	Chatham	33	Portsmouth	3
Flagstaff	8	Chatham	33	Sandusky	9.0
Flagstaff	8	Chatham	33	Toledo	7.5
Flagstaff	8	Chatham	33	Wauson	1
Flagstaff	8	Chatham	33	<b>Oregon.</b>	
Flagstaff	8	Chatham	33	Baker City	4
Flagstaff	8	Chatham	33	Portland	3 0.0
Flagstaff	8	Chatham	33	<b>Pennsylvania.</b>	
Flagstaff	8	Chatham	33	Claysville	1
Flagstaff	8	Chatham	33	Easton	2
Flagstaff	8	Chatham	33	Erie	7.0
Flagstaff	8	Chatham	33	Fairmount	10
Flagstaff	8	Chatham	33	Harrisburg	3 0.0
Flagstaff	8	Chatham	33	Philadelphia	4 1.0
Flagstaff	8	Chatham	33	Pittsburg	1
Flagstaff	8	Chatham	33	Seranton	1
Flagstaff	8	Chatham	33	State College	4
Flagstaff	8	Chatham	33	<b>Rhode Island.</b>	
Flagstaff	8	Chatham	33	Block Island	T. 0.0
Flagstaff	8	Chatham	33	Kingston	3
Flagstaff	8	Chatham	33	Narragansett	1
Flagstaff	8	Chatham	33	Providence	4 0.0
Flagstaff	8	Chatham	33	<b>South Dakota.</b>	
Flagstaff	8	Chatham	33	Huron	12 22.0
Flagstaff	8	Chatham	33	Pierre	30 23.0
Flagstaff	8	Chatham	33	Rapid City	1
Flagstaff	8	Chatham	33	Yankton	6 22.0
Flagstaff	8	Chatham	33	<b>Tennessee.</b>	
Flagstaff	8	Chatham	33	Memphis	T. 0.0
Flagstaff	8	Chatham	33	Nashville	1 0.0
Flagstaff	8	Chatham	33	<b>Utah.</b>	
Flagstaff	8	Chatham	33	Modena	T.
Flagstaff	8	Chatham	33	<b>Vermont.</b>	
Flagstaff	8	Chatham	33	Brattleboro	6 14.0
Flagstaff	8	Chatham	33	Burlington	T. 9.5
Flagstaff	8	Chatham	33	Northfield	8
Flagstaff	8	Chatham	33	St. Johnsbury	14
Flagstaff	8	Chatham	33	<b>Virginia.</b>	
Flagstaff	8	Chatham	33	Dale Enterprise	3
Flagstaff	8	Chatham	33	Fredericksburg	2
Flagstaff	8	Chatham	33	Lynchburg	1 0.0
Flagstaff	8	Chatham	33	Mount Weather	5
Flagstaff	8	Chatham	33	Richmond	2 0.0
Flagstaff	8	Chatham	33	Stephens City	4
Flagstaff	8	Chatham	33	Wytheville	2
Flagstaff	8	Chatham	33	<b>Washington.</b>	
Flagstaff	8	Chatham	33	Seattle	2
Flagstaff	8	Chatham	33	Spokane	4
Flagstaff	8	Chatham	33	Tacoma	3
Flagstaff	8	Chatham	33	Walla Walla	11
Flagstaff	8	Chatham	33	<b>West Virginia.</b>	
Flagstaff	8	Chatham	33	Elkins	3 0.0
Flagstaff	8	Chatham	33	Parkersburg	4 0.0
Flagstaff	8	Chatham	33	Romney	4
Flagstaff	8	Chatham	33	<b>Wisconsin.</b>	
Flagstaff	8	Chatham	33	Ashland	28
Flagstaff	8	Chatham	33	Eau Claire	17
Flagstaff	8	Chatham	33	Grand Rapids	12
Flagstaff	8	Chatham	33	Green Bay	6 13.0
Flagstaff	8	Chatham	33	Keshena	20
Flagstaff	8	Chatham	33	La Crosse	6 20.0
Flagstaff	8	Chatham	33	Medford	17
Flagstaff	8	Chatham	33	Milwaukee	4 0.0
Flagstaff	8	Chatham	33	New London	8
Flagstaff	8	Chatham	33	Portage	6
Flagstaff	8	Chatham	33	Racine	4
Flagstaff	8	Chatham	33	Sheboygan	6
Flagstaff	8	Chatham	33	<b>Wyoming.</b>	
Flagstaff	8	Chatham	33	Cheyenne	1
Flagstaff	8	Chatham	33	Lander	T.
Flagstaff	8	Chatham	33	Yellowstone Park	20

\* Shore ice.

† Floating ice.

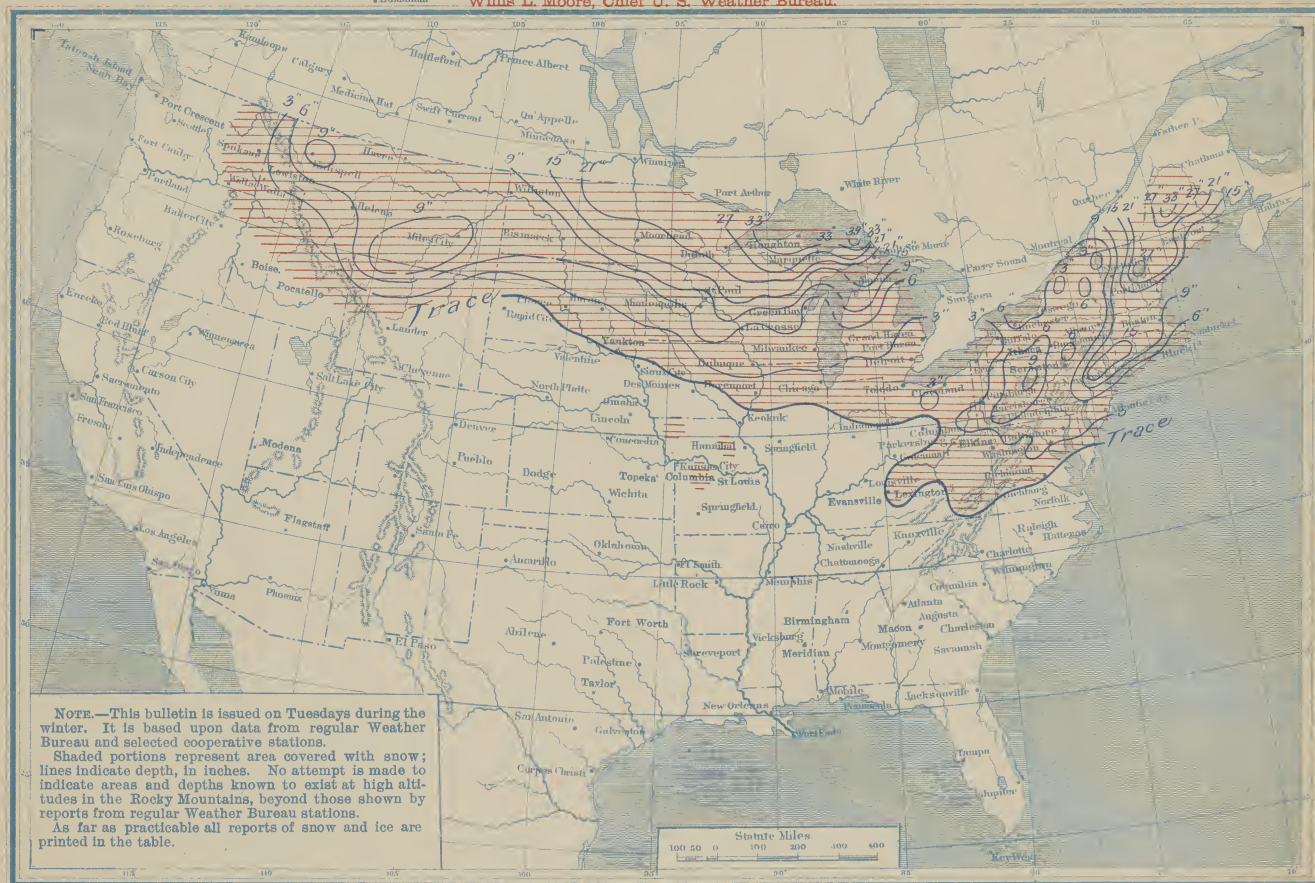
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U. S. DEPARTMENT OF AGRICULTURE,  
WEATHER BUREAU.  
SNOW AND ICE BULLETIN.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., February 12, 1907.

DEPTH OF SNOW.

While the weather during the greater part of the week was colder than the average, the temperature was sufficiently high on the 9th and 10th to cause snow to disappear rapidly, especially in the region westward of the Great Lakes. The southern limit at 8 p. m., February 11, 1907, over the central portions of the country was from 300 to 400 miles farther north than at the same hour on the 4th instant, and from 50 to 150 miles farther north in the Middle Atlantic States. At 8 p. m. on the 11th the depth ranged from 3 to 12 inches in Montana, from 7 to 25 inches in North Dakota, from 6 inches to more than 2 feet over the northern portions of Minnesota and Wisconsin, and from 1 foot to more than 3 feet in the Upper Michigan Peninsula. In the western portion of the lower Lake region there was only a slight covering, but over the eastern portion and in the Middle Atlantic States the depths generally ranged from 3 to more than 8 inches. The greater part of New England was covered to depths ranging from 6 to more than 10 inches, portions of northern New Hampshire, Vermont, and Maine having depths ranging from 1 foot to nearly 3 feet.

As compared with the measurements of the previous week (4th instant), diminished depths are shown from the Lake region westward, while to the eastward there has been an increase.

The area covered at the corresponding period of 1906 was much the same as at this date, but there is now generally more snow than there was on February 11, 1906, especially along the north Atlantic coast and in the Lake region and the northern districts to the westward.

ICE IN RIVERS, HARBORS, ETC.

The temperature in the northern portions of the country during the greater part of the week ending at 8 p. m., February 11, 1907, was favorable for the formation of ice, the daily means being much below freezing during the fore part of the week. Milder weather prevailed during the latter part of the week, the temperature rising above freezing in the Missouri, upper Mississippi, and Red River of the North valleys on the 9th and 10th, but remained below freezing throughout the week in the Lake region and New England and was below freezing in the Middle Atlantic States on all dates but the 10th and 11th. In the Missouri River ice now ranges from 17 inches at Sioux City, Iowa, to 37 inches at Bismarck, N. Dak., with an ice gorge at Kansas City, Mo.; in the Mississippi, from 6 inches at Davenport, Iowa, to 24 inches at St. Paul, Minn., with ice gorges at Keokuk, Iowa, and Hannibal, Mo.; at stations on or near the Great Lakes, generally from 8 to 24 inches, 30 inches being reported from Duluth Harbor; in the rivers of New England, from 13 to 22 inches. The ice measurements at 8 p. m. of the 11th instant, as compared with those at the same hour on the 4th instant, show a general increase, except in the central Missouri Valley, where a slight decrease occurred. As a rule, the increase was not marked, except in the Lake region, where it ranged from 1 inch to 5 inches.

The following special reports have been received by telegraph:  
**Concord, N. H., February 11.**—Ice is about 20 inches thick on lakes. Cutting is progressing well and a fine crop is being harvested.  
**Albany, N. Y., February 12.**—The snow averages 8 inches in depth in the Hudson Valley; in the Mohawk Valley it averages 4 inches. The ice averages 13 inches in thickness in the Hudson River and 11 inches in the Mohawk.  
**Harrisburg, Pa., February 11.**—The river closed Thursday noon by the gorging of ice cakes. The surface is very rough and uneven; the ice is 1 to 4 feet thick where gorged, and about 6 inches thick on the smooth surfaces.  
**Duluth, Minn., February 11.**—A solid field of ice 12 to 18 inches thick extends lakeward for about 12 miles.  
**Davenport, Iowa, February 11.**—There is some shore ice, but the channel of the river is open.  
**Keokuk, Iowa, February 11.**—The ice gorge extends more than 8 miles; the river is backed to a stage of 14.5 feet at Keokuk. An excellent quality of 12-inch ice is being cut on the canal.  
**Hannibal, Mo., February 11.**—Ice gorged at the bridge on February 6. Shore ice extends out 20 to 80 yards.  
**Kansas City, Mo., February 11.**—Light floating ice is gorged above the bridge.  
**Sioux City, Iowa, February 12.**—Shore ice extends 65 feet from the banks, but the channel of the river is open above and below the ice as far as can be observed.  
In all northern districts there is now considerably more ice than there was at the corresponding period of 1906, the increase generally ranging from 1 inch to 8 inches in the central and western districts, and from 4 to more than 10 inches in New England.

JAMES BERRY, Chief of Climatological Division.

DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., FEBRUARY 11, 1907.

Stations.			Stations.			Stations.		
Snow.			Snow.			Snow.		
Inches			Inches			Inches		
<b>Arizona.</b>			<b>Michigan—Cont'd.</b>			<b>Ohio—Cont'd.</b>		
Flagstaff	T.		Sault Ste. Marie	19	20.0	Columbus	T.	10.0
<b>Connecticut.</b>			<b>Minnesota.</b>			<b>Pennsylvania.</b>		
New Haven	12	13.0	Bird Island	4		Claysville	3	
West Simsbury	20		Duluth	26	30.0	Kenton	T.	
<b>Delaware.</b>			Faribault	5		Sandusky	T.	11.0
Millsboro	1		Farmington	12		Tiffin	T.	
<b>Dist. of Columbia.</b>			Grand Meadow	7		Toledo	T.	10.5
Washington	2	2.0	Milan	5		Wauseon	1	
<b>Illinois.</b>			Minneapolis	6		<b>Rhode Island.</b>		
Chicago	2		Moorhead	18	38.0	Block Island	2	0.0
La Salle	T.	6.0	New London	12		Kingston	10	
Monmouth	T.		St. Paul	3	24.0	Narragansett	4	
Peoria	T.	8.0	Wabasha	10		Providence	9	0.0
<b>Indiana.</b>			Worthington	2		<b>South Dakota.</b>		
Marion	T.		<b>Missouri.</b>			Huron	2	21.0
<b>Iowa.</b>			Hannibal	†		Pierre	1	22.0
Carroll	T.		Kansas City	†		Yankton	1	21.0
Charles City	5		Macon	T.		<b>Vermont.</b>		
Davenport	T.		Maryville	T.		Brattleboro	10	16.0
Des Moines	13.5		Sedalia	T.		Burlington	3	11.0
Dubuque	17.0		<b>Montana.</b>			Northfield	12	
Iowa City	T.		Hayre	7		St. Johnsbury	17	
Keokuk	12.0		Helena	3		<b>Virginia.</b>		
Sioux City	17.0		Kalspell	11		Blacksburg	T.	
<b>Kentucky.</b>			Miles City	10		Fredericksburg	T.	
Catlettsburg	T.		<b>Nebraska.</b>			Lincoln	5	
Eubank	T.		Omaha	18.0		Lynchburg	T.	0.0
Lexington	T.		<b>New Hampshire.</b>			Mount Weather	3	
<b>Maine.</b>			Bethlehem	18		Richmond	2	1.0
Bangor	12	19.0	Concord	10	19.0	Stephens City	5	
Cornish	21		Durham	10		Woodstock	2	
Danforth	26		Keene	10		Wytheville	T.	
Eastport	10	18.0	<b>New Jersey.</b>			<b>Washington.</b>		
Gardiner	24	22.0	Asbury Park	4		Spokane	T.	
Lewiston	37	19.0	Atlantic City	4		Walla Walla	1	
Millinocket	35		Bridgeton	3		<b>West Virginia.</b>		
Orono	18		Cape May	1	3.5	Elkins	T.	0.0
Portland	12	0.0	Charlotteburg	15		Parkersburg	1	0.0
<b>Maryland.</b>			Hightstown	7		Romey	1	
Baltimore	3	5.0	Phillipsburg	10		Weston	2	
Easton	3		<b>New York.</b>			<b>Wisconsin.</b>		
Fallston	5		Albany	5	9.0	Ashland	24	
<b>Massachusetts.</b>			Binghamton	4		Eau Claire	14	
Boston	8		Buffalo	1	8.0	Green Bay	4	13.5
Concord	11		Canton	2		Koepnick	18	
Fitchburg	13		Cooperstown	5		La Crosse	3	28.0
Nantucket	6	0.0	Cutchogue	5	6.0	Madison	3	
<b>Michigan.</b>			Franklinville	7		Medford	15	
Alpena	4	13.0	Geneva	3		Millwaukee	3	0.0
Ann Arbor	1		Ithaca	7		Portage	4	
Battle Creek	1		Le Roy	4		Racine	8	
Big Rapids	4		New York	7		Sheboygan	4	
Calumet	38		Oswego	8	11.0	Stevens Point	7	
Carsonville	2		Plattsburg	2		Viroqua	5	
Chatham	31		Rochester	6	7.5	Waupaca	6	
Detroit	T.	10.0	Saranac Lake	8		<b>Wyoming.</b>		
Escanaba	12	24.0	Saratoga	4		Yellowstone Park	12	
Grand Haven	4	0.0	Southampton	3	10.0			
Grand Marais	40		Syracuse	4				
Grand Rapids	4		Wedgwood	6				
Hillsdale	2		<b>North Dakota.</b>					
Houghton	38	13.5	Bismarck	8	37.0			
Humboldt	37		Devils Lake	25				
Iron River	34		Williston	7	28.0			
Lansing	3		<b>Ohio.</b>					
London	8		Bangorville	5				
Marquette	20		Cadiz	3				
Port Huron	2	12.0	Cincinnati	T.				
			Cleveland	T.	12.0			

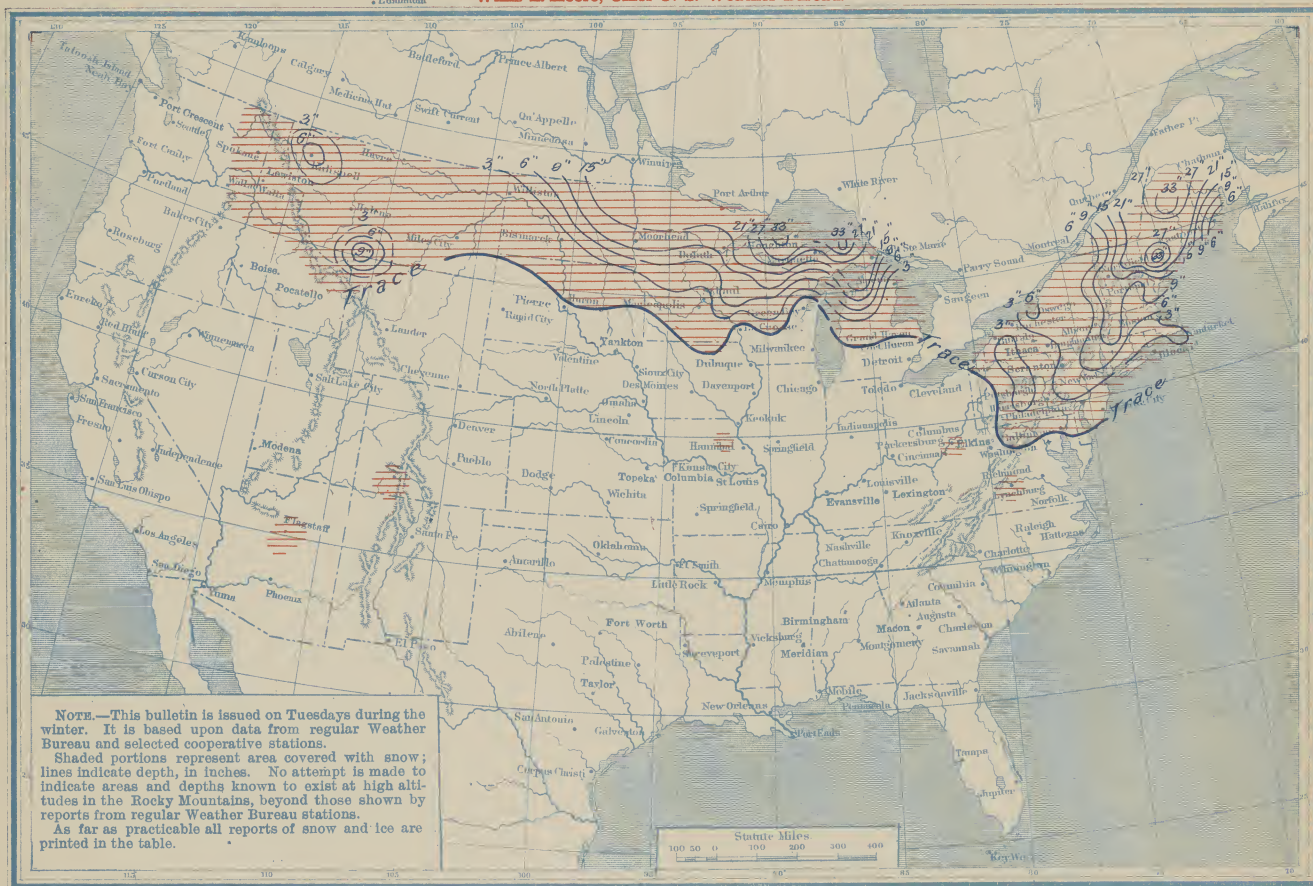
\* Shore ice. † Floating ice. ‡ Ice gorge. T. indicates trace.



# SNOW AND ICE BULLETIN.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., February 19, 1907.

## DEPTH OF SNOW.

The abnormally high temperature in the region westward of the Great Lakes caused rapid melting of snow, and while there was a deficiency in the weekly mean temperature in the lower Lake region, Middle Atlantic States, and New England, much snow melted in these districts also, except in northern New England, where somewhat greater depths are reported. In Montana, North Dakota, Minnesota, Wisconsin, and Michigan the depths at 8 p. m., February 18, 1907, were generally from 3 to 10 inches less than on the 11th instant; in the eastern portion of the lower Lake region, southern New England, and the northern portion of the Middle Atlantic States the decrease generally ranged from 3 to 9 inches, while over the greater part of northern New England there was an increase of from 1 to 12 inches.

The area covered on February 18 was considerably smaller than that covered on the 11th, the southern limit over the central portion of the country generally ranging from 100 to 200 miles further north, the area of greatest depth embracing eastern North Dakota, northern Minnesota, northern Wisconsin, the Upper Michigan Peninsula, and northern New England, where the amounts generally ranged from 1 foot to 3 feet. The central valleys and the southern portion of the upper Lake region are now entirely bare.

Along the New England coast, at a few stations in the Lake region, and from Minnesota westward to Idaho there is now more snow than there was at the corresponding period of 1906, but there is less over the interior of the Middle Atlantic States. Portions of the upper Lake region and upper Mississippi Valley that are now free from snow were covered to considerable depths in 1906.

## ICE IN RIVERS, HARBORS, ETC.

At 8 p. m., February 18, ice in the Missouri River ranged from 14 inches at Pierre to 35 inches at Bismarck, with floating ice at Sioux City and Omaha; in the Mississippi, from 14 inches at Davenport to 20 at St. Paul and 22 at La Crosse; at stations on or near the Great Lakes, generally from 8 to 24 inches, there being 30 inches in Duluth Harbor; in the rivers of New England, generally from 16 to 22 inches.

Under the abnormally mild temperatures prevailing in the Missouri and upper Mississippi valleys a marked decrease in the thickness of ice occurred. The measurements at 8 p. m., February 18th, as compared with those made at the same hour on the preceding Monday (11th), show a decrease ranging from 2 to 8 inches at Missouri River stations at which the river remains frozen, ice having broken up as far north as Yankton. In the Mississippi the decrease ranges from 1 inch to 4 inches northward of Dubuque, the river being open at Davenport and to the southward. In the Lake region and New England very little change in ice conditions has occurred, some reports showing a slight increase and others no change or a slight decrease.

The following special reports have been received by telegraph:

Gardiner, Me., February 18.—The great depth of snow and ice is unfavorable for lumber and ice operations.

Leicester, Me., February 18.—One ice firm has harvested twenty-five thousand tons of ice on the Androscoggin River.

Concord, N. H., February 18.—Ice is about 20 inches thick on the lakes. Cutting is nearing completion; a large crop of fine quality has been harvested.

Albany, N. Y., February 19.—The snow averages 5 inches in depth in the Mohawk Valley; in the Hudson Valley the depth ranges from 3 inches at Athens to 9 inches at Corinth. Ice averages 13 inches in thickness in the Hudson and Mohawk rivers.

Duluth, Minn., February 18.—Lake ice extends solid about 5 miles.

Des Moines, Iowa, February 18.—The ice has broken below the dam and is free from the shore above, rendering measurement impossible.

Kokuk, Iowa, February 18.—The river is open. There is 10-inch ice in the canal, but it is too soft to harvest.

Omaha, Neb., February 18.—The ice at this point broke up and ran out at 2 a. m. to-day. It broke 6 miles above at Florence at midday. Large packs are running.

Sioux City, Iowa, February 19.—The gorge below Vermillion broke Monday afternoon and the river is now full of heavy floating ice.

Yankton, S. Dak., February 18.—The ice broke in the early morning of the 17th. There was much floating ice that day, but the channel is now clear.

Huron, S. Dak., February 18.—The ice is floating and honeycombed; measurements are impracticable.

There is now more ice in New England and the Lake region, and at the more northerly stations on the upper Mississippi and upper Missouri rivers, than there was at the corresponding date of 1906, but the two rivers named are not frozen so far south as in 1906.

JAMES BERRY, Chief of Climatological Division.

## DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., FEBRUARY 18, 1907.

Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
Arizona.	Inches	Inches	Michigan—Cont'd.	Inches	Inches	N. Dak.—Cont'd.	Inches	Inches
Flagstaff .....	T.		South Haven .....	T.		Devils Lake .....	15	
Colorado.			Minnesota.			Williston .....	2	28.0
Durango .....	T.		Duluth .....	8	30.0	Ohio.		
Connecticut.			Faribault .....	T.		Cleveland .....		11.0
Hartford .....	3	13.5	Grand Meadow .....	2		Columbus .....		4.5
New Haven .....	5		Minneapolis .....	T.		Sandusky .....		8.0
West Simsbury .....	12		Moorhead .....	13	35.0	Toledo .....		9.5
Dist. of Columbia.			Morris .....	T.		Pennsylvania.		
Washington .....	†		New London .....	4		Easton .....	5	
Illinois.			St. Paul .....	T.	20.0	Ephrata .....		5
La Salle .....	4.0		Wabasha .....	3		Erie .....	T.	11.0
Iowa.			Missouri.			Harrisburg .....	T.	6.0
Charles City .....	T.		Macon .....	T.		Millfildtown .....	3	
Des Moines .....	4		Montana.			Philadelphia .....	T.	2.0
Dubuque .....	14.0		Havre .....	T.		Scranton .....	3	
Sioux City .....	†		Helena .....	2		State College .....		
Maine.			Kalspell .....	7		Rhode Island.		
Bangor .....	23	19.5	Miles City .....	1		Block Island .....	T.	0.0
Danforth .....	30		Nebraska.			Narragansett .....	1	
Eastport .....	3	19.0	Omaha .....	†		Providence .....	5	0.0
Gardiner .....	36	22.0	New Hampshire.			South Dakota.		
Lewiston .....	40	19.0	Bethlehem .....	23		Huron .....	T.	†
Millinocket .....	37		Concord .....	6	19.0	Pierre .....	T.	14.0
Orono .....	22		Durham .....	12		Vermont.		
Portland .....	14	0.0	Hanover .....	9		Brattleboro .....	9	18.0
Maryland.			Keene .....	8		Burlington .....	3	16.0
Baltimore .....	T.	4.0	New Jersey.			Northfield .....	12	
Easton .....	T.		Atlantic City .....	T.		St. Johnsbury .....	16	
Massachusetts.			Cape May .....	T.	3.5	Virginia.		
Amherst .....	6		Tuckerton .....	T.		Dale Enterprise .....	T.	
Boston .....	2		New York.			Lynchburg .....	T.	0.0
Concord .....	7		Albany .....	3	9.0	Mount Weather .....	T.	
Fitchburg .....	7		Auburn .....	3		Stephens City .....	T.	
Mansfield .....	6		Binghamton .....	2		Washington.		
Nantucket .....	4	0.0	Buffalo .....	T.	8.0	Spokane .....	T.	
North Adams .....	10		Canton .....	4		Walla Walla .....	T.	
Michigan.			Cooperstown .....	5		West Virginia.		
Alpena .....	2	15.5	Cutogue .....	2	6.0	Parkersburg .....	T.	0.0
Battle Creek .....	T.		De Ruyter .....	6		Wisconsin.		
Calumet .....	33		Franklinville .....	4		Ashland .....	18	
Chatham .....	27		Geneva .....	2		Eau Claire .....	6	
Detroit .....	10.0		Ithaca .....	2		Grand Rapids .....	6	
Escanaba .....	8	24.0	New York .....	3		Green Bay .....	12.0	
Grand Haven .....	T.	0.0	Oswego .....	6	14.0	Koepnick .....	15	
Grand Marais .....	38		Plattsburg .....	3		La Crosse .....	22.0	
Grand Rapids .....	T.		Rochester .....	2	8.0	Medford .....	6	
Houghton .....	30	20.0	Saranac Lake .....	10		Stevens Point .....	3	
Iron River .....	25		Saratoga .....	5		Viroqua .....	T.	
Ledington .....	T.		Southampton .....	T.		Waupaca .....	T.	
Mancelona .....	20		Syracuse .....	3		Wausau .....	5	
Marquette .....	17	4.0	Wedgwood .....	1		Wyoming.		
Port Huron .....	T.	14.0	North Dakota.			Yellowstone Park .....	10	
Sault Ste. Marie .....	18	20.0	Bismarck .....	1	35.0			

† Floating ice.

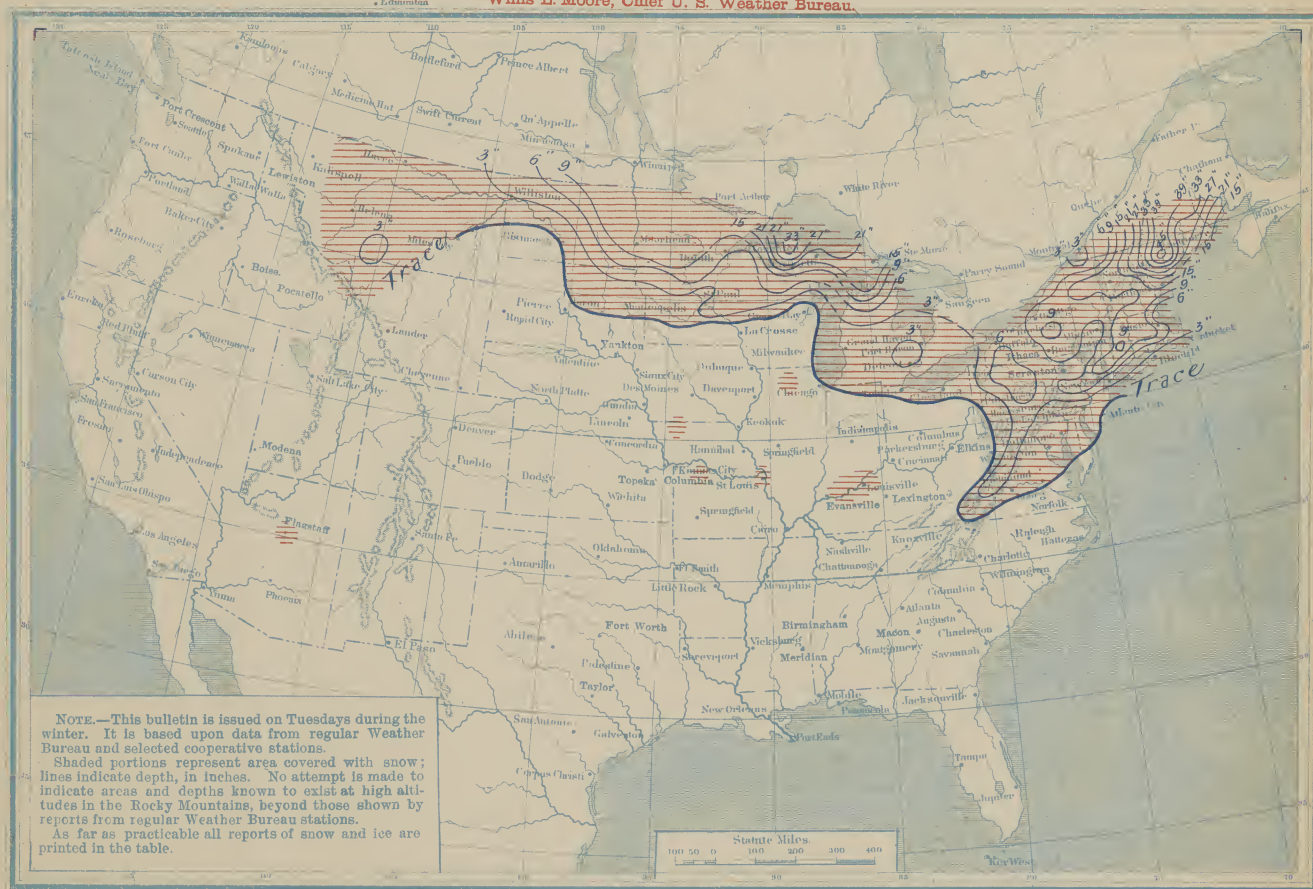
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U. S. DEPARTMENT OF AGRICULTURE,  
WEATHER BUREAU.  
SNOW AND ICE BULLETIN.

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Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., February 26, 1907.

DEPTH OF SNOW.

Heavy snow fell on the 23d and 24th over the northern portion of the Middle Atlantic States, the eastern portion of the lower Lake region, and in New England. The depths at 8 p. m., February 25, 1907, generally ranged from 3 to 9 inches over the two first-named districts and in southern New England, while in northern New England they ranged from 1 foot to more than 3 feet. From the northern portion of the Upper Michigan Peninsula westward to eastern North Dakota the depths generally ranged from 6 inches to more than 1 foot, except along the southern shore of Lake Superior, where they were much greater, from 2 to nearly 3 feet being reported in the vicinity of Houghton, Mich. In eastern North Dakota and northwestern Minnesota the ground is still covered to depths of 1 foot. The southern limit now extends from eastern Montana southeastward thru eastern South Dakota, southern Minnesota, and southern Wisconsin, along the southern shore of Lake Michigan, thru the northern portions of Indiana and Ohio to western Pennsylvania, thence southward over the Appalachian Mountains to southwestern Virginia, and thence north-eastward to the middle Atlantic coast.

Westward of the upper Lakes the area covered and the depths reported at 8 p. m., February 25, were somewhat smaller than on the preceding Monday, but to the eastward the area and depths were greater on the 25th than on the 18th.

There is now much more snow in the extreme northern districts than there was at the corresponding date of 1906, when there was very little snow in New England, but in portions of the upper Mississippi and central Missouri valleys, where there is now no snow, there were considerable depths on February 25, 1906.

ICE IN RIVERS, HARBORS, ETC.

The weather during the week ending February 25, 1907, was milder than usual in the upper Mississippi and Missouri valleys, the high temperatures of the previous week continuing until the 20th, after which there was a decided fall in temperature, lasting until the 23d. In the Lake region, New England, and the northern portion of the Middle Atlantic States, the coldest weather was during the latter part of the week, from the 22d to the 25th, when good ice forming temperatures prevailed. Under the mild conditions of this and the preceding week, ice in the upper Missouri River has been much broken up and, where it remains intact, it is much diminished in thickness, 30 inches being reported from Bismarck as compared with 35 inches on the 18th instant. In the upper Mississippi, where ice ranges from 16 to 20 inches, but slight changes have occurred during the week. At most stations on or near the Great Lakes, where ice generally ranges from 8 to 26 inches—30 inches being reported from Duluth Harbor—there has been a general increase ranging from 1 inch to 4 inches, altho diminished thickness is indicated at a few stations. In the rivers of New England ice generally ranges from 20 to 24 inches, an increase of from 1 inch to 5 inches over the reports of the previous week. A considerable increase is also shown over the northern portion of the Middle Atlantic States.

The following special reports have been received by telegraph:

Albany, N. Y., February 25.—The ice averages 14 inches in thickness in the Hudson River and 15 inches in the Mohawk.

Parkesburg, W. Va., February 25.—The river is full of running ice this morning. Duluth, Minn., February 25.—Ice in harbor is 30 inches thick. Lake ice is 10 miles wide at Superior entry and one-half mile wide at Duluth entry.

Keokuk, Iowa, February 25.—The river is free from ice, except the remains of the recent gorge in the shallows. Seven-inch ice is being cut on the canal.

Hannibal, Mo., February 25.—There is a little shore ice, and the river is about half full of floating ice.

St. Louis, Mo., February 25.—There is light floating ice in the river.

Kansas City, Mo., February 25.—There is heavy floating ice in the river.

Sioux City, Iowa, February 25.—An ice gorge 12 miles long continues in the vicinity of Vermillion. About 100 square miles of farm land are now under water.

Yankton, S. Dak., February 25.—There is thin shore ice along the river and slush ice is running in the channel.

Huron, S. Dak., February 25.—The ice is rotten; measurements are impracticable.

Williston, N. Dak., February 25.—The ice is detached from the shore.

Except in the upper Missouri River there is now more ice than there was at the corresponding period of 1906, the greatest increase, generally ranging from 10 to 20 inches, existing over the eastern part of the lower Lake region and in New England.

JAMES BERRY, Chief of Climatological Division.

DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., FEBRUARY 25, 1907.

Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
Arizona.	Inches	Inches	Michigan—Cont'd.	Inches	Inches	Ohio—Cont'd.	Inches	Inches
Flagstaff.	T.		South Haven.	2		Columbus.		6.0
Connecticut.			Minnesota.			Garrettsville.	2	
Hartford.	8	13.0	Bird Island.	T.		Sandusky.	T.	8.0
New Haven.	9		Duluth.	8	30.0	Toledo.	T.	8.0
West Simsbury.	15		Farmington.	6		Wauson.	T.	
Delaware.			Milan.	T.		Pennsylvania.		
Millsboro.	1		Minneapolis.	T.		Easton.	5	
Newark.	2		Moorhead.	12	38.0	Ephrata.	9	
Dist. of Columbia.			New London.	3		Erie.	2	10.0
Washington.	1	0.0	St. Paul.	T.	20.0	Gordon.	8	
Illinois.			Missouri.			Harrisburg.	1	10.0
Chicago.	T.		Hannibal.		†	Millintown.	5	
Dixon.	T.		Kansas City.	T.		Philadelphia.	1	2.0
La Salle.			Maryville.	T.		Pittsburg.	T.	0.0
Indiana.			St. Louis.	T.		St. Marys.	6	
Evansville.	T.	0.0	Sedalia.	T.		Saegerstown.	3	
Iowa.			Montana.			Seranton.	2	
Des Moines.	7.0		Havre.	1		Selins Grove.	6	
Dubuque.	16.0		Helena.	2		South Eaton.	8	
Sioux City.	†		Miles City.	T.		Towanda.	3	11.0
Kentucky.			New Hampshire.			Williamsport.	2	
Louisville.	T.	0.0	Bethlehem.	24		Rhode Island.		
Maine.			Concord.	7	20.0	Block Island.	1	5.0
Bangor.	24	21.0	Durham.	13		Kingston.	10	
Buckfield.	43		New Jersey.			Narragansett.	3	
Danforth.	36		Bridgeport.	2		Providence.	7	2.5
Eastport.	15	24.0	Cape May.	1	4.0	South Dakota.		
Gardiner.	40	22.0	Charlotteburg.	10		Huron.	T.	?
Lewiston.	48	20.0	Hightstown.	4		Pierre.	T.	0.0
Millinocket.	39		Phillipsburg.	6		Yankton.	†	
Orono.	26		New York.			Vermont.		
Portland.	22	0.0	Addison.	1		Bartlettboro.	11	20.0
Maryland.			Albany.	3	11.5	Burlington.	4	17.0
Baltimore.	2	9.5	Binghamton.	6		Northfield.	10	
Easton.	2		Buffalo.	3	11.0	St. Johnsbury.	18	
Massachusetts.			Canton.	4		Virginia.		
Amherst.	8		Cooperstown.	7		Blacksburg.	4	
Boston.	3		De Ruyter.	10		Dale Enterprise.	5	
Pitchburg.	14		Franklinville.	7		Fredericksburg.	1	
Mansfield.	11		Geneva.	3		Lynchburg.	1	0.0
Nantucket.	1	3.0	Herkimer.	7		Mount Weather.	2	
North Adams.	11		Ithaca.	7		Richmond.	T.	1.5
Michigan.			Le Roy.	2		Stephens City.	3	
Alpena.	3	17.0	Malone.	2		Woodstock.	4	
Ann Arbor.	3		New York.	5		Wytheville.	T.	
Big Rapids.	30		Ogdensburg.	7		West Virginia.		
Calumet.	T.		Oswego.	7	15.5	Elkins.	T.	0.0
Chatham.	23		Plattsburg.	2		Romney.	T.	
Detroit.	4	10.0	Poughkeepsie.	6		Wisconsin.		
Escanaba.	7	26.0	Rochester.	4		Ashland.	T.	
Grand Haven.	2	0.0	Rome.	8		Eau Claire.	4	
Grand Rapids.	1		Saranac Lake.	12		Green Bay.	10.0	
Hillsdale.	2		Saratoga.	8		Kooplenick.	12	
Houghton.	30	19.5	Syracuse.	6		La Crosse.	19.0	
Humboldt.	34		Watertown.	4		Medford.	4	
Iron Mountain.	4		Wedgwood.	2		Millwaukee.	T.	0.0
Iron River.	2		North Dakota.			Stevens Point.	1	
Ludington.	2		Bismarck.	T.	30.0	Viroqua.	T.	
Mancelona.	18		Devils Lake.	13		Waupaca.	T.	
Marquette.	17	9.0	Williston.	3		Wausau.	3	
Port Huron.	2	18.0	Ohio.			Wycmity.		
Saginaw.	1		Bangorville.	T.		Yellowstone Park.	4	
Sault Ste. Marie.	19	21.0	Cleveland.	1	8.0			

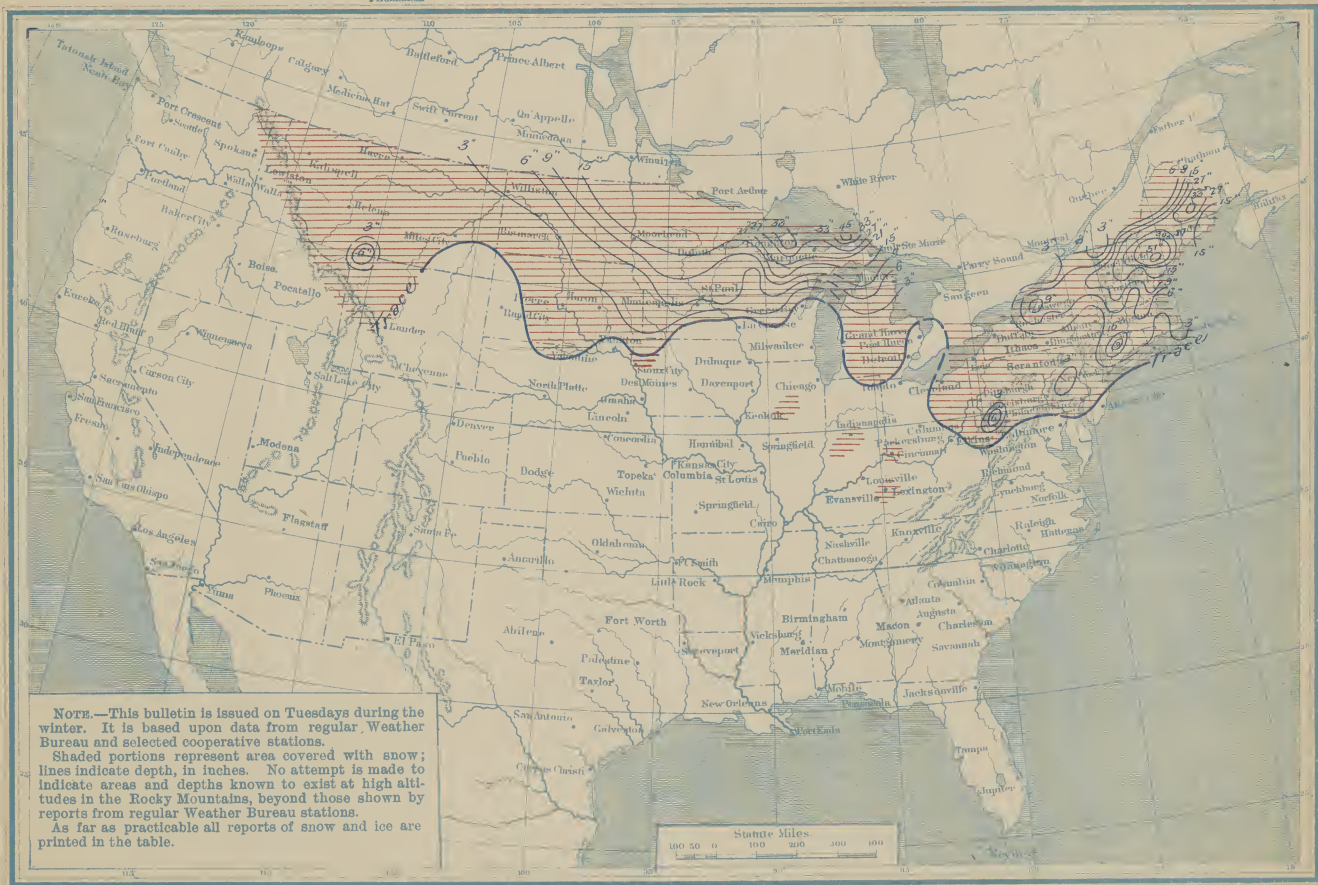
\* Shore ice. † Floating ice. ‡ Ice gorge. T. Indicates trace.



U. S. DEPARTMENT OF AGRICULTURE,  
WEATHER BUREAU.  
SNOW AND ICE BULLETIN.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

Willis L. Moore, Chief U. S. Weather Bureau.



NOTE.—This bulletin is issued on Tuesdays during the winter. It is based upon data from regular Weather Bureau and selected cooperative stations. Shaded portions represent area covered with snow; lines indicate depth, in inches. No attempt is made to indicate areas and depths known to exist at high altitudes in the Rocky Mountains, beyond those shown by reports from regular Weather Bureau stations. As far as practicable all reports of snow and ice are printed in the table.

WASHINGTON, D. C., March 5, 1907.

DEPTH OF SNOW.

The area covered with snow at 8 p. m., March 4, was somewhat greater than on February 25 to the westward of the Lake region, but to the eastward it was less. Over the northern portions of Michigan and Wisconsin and the greater part of Minnesota and North Dakota the depth at 8 p. m. of the 4th instant ranged from 3 to 12 inches, or more, the Upper Michigan Peninsula having depths ranging from 2 to 4 feet along the southern shore of Lake Superior. The eastern portion of the lower Lake region and the whole of New England were covered to depths exceeding 3 inches, the northern portion of New England having depths ranging from 12 inches to more than 4 feet, the greatest being reported from southwestern Maine.

At the corresponding date of 1906 the upper Mississippi and central Missouri valleys and the northern Rocky Mountain region, which are now bare, were covered to considerable depths, while North Dakota, northern Minnesota, and New England are now covered to much greater depths than existed at the corresponding period of 1906.

ICE IN RIVERS, HARBOURS, ETC.

In the lower Missouri, central Mississippi, and lower Ohio valleys the mean temperature for the week ending March 4, 1907, was above the normal, but in the northern districts from the upper Missouri Valley eastward to the New England and middle Atlantic coasts the week was colder than the average, and while temperatures below freezing prevailed over the greater part of these districts most of the week, the reports show no decided increase in the thickness of ice as compared with the measurements of the previous week (February 25). At 8 p. m., March 4, ice in the upper Missouri ranged from 20 inches at Williston, N. Dak., to 26 inches at Bismarck, N. Dak., with floating ice at Yankton, S. Dak.; in the upper Mississippi, from 12 inches at Dubuque, Iowa, to 23.5 inches at La Crosse, Wis.; at stations on the upper Lakes, from 8 to 29 inches, and on the lower Lakes, from 5 to 16 inches; and in the rivers of New England, from 12 to 26 inches.

The following special reports have been received by telegraph; that from Detroit relates to the conditions existing thruout the Great Lakes and is a summary of a large number of reports collected at that station:

*Albany, N. Y., March 5.*—The snow averages 4 inches in depth in the Hudson Valley and 5 inches in the Mohawk Valley. The ice averages 15 inches in thickness in the Hudson and Mohawk rivers.

*Duluth, Minn., March 4.*—Harbor ice is 16 to 34 inches in thickness. The Lake ice field extends beyond Two Harbors.

*Dubuque, Iowa, March 4.*—The ice has moved down about 350 feet, leaving a large area of open water. All of the ice is badly honeycombed and open near the shore.

*Sioux City, Iowa, March 5.*—The ice gorge at Vermillion still holds.

*Yankton, S. Dak., March 4.*—The river was thinly frozen over on the 1st, but broke again on the 2d. Light slush ice is now running in the channel.

*Detroit, Mich., March 5.*—Over western Lake Superior the ice fields extend beyond Two Harbors and the central and eastern portions are covered with extensive fields. Green Bay is solid, the ice ranging from 10 to 23 inches. Lake Michigan has but few ice fields. Ice in the Straits of Mackinac is solid, 12 inches thick, and extends from Bois Blanc Island to Lake Michigan. Extensive fields cover the northern portion of Lake Huron. There is an ice bridge at the mouth of St. Clair River. Along the southern shore of Lake Erie ice fields extend beyond vision. In Lake Ontario the ice fields are greater than last season. In all of the Great Lakes there is more ice than last year.

At most stations from which ice is now reported there is much more ice than at the corresponding date of 1906, the difference being most marked in the Lake region and New England. In the upper Missouri River, however, there is but little change.

JAMES BERRY, Chief of Climatological Division.

DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., MARCH 4, 1907.

Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
<i>Arizona.</i>	<i>Inches</i>	<i>Inches</i>	<i>Michigan—Cont'd.</i>	<i>Inches</i>	<i>Inches</i>	<i>N. Dak.—Cont'd.</i>	<i>Inches</i>	<i>Inches</i>
Flagstaff.....	T.		Manacola.....	14		Williston.....	3	20.0
<i>Connecticut.</i>			Marquette.....	22	12.0	<i>Ohio.</i>		
Hartford.....	3	12.5	Saginaw.....	1		Bangorville.....	T.	
New Haven.....	5		Sault Ste. Marie.....	20	21.0	Cincinnati.....	T.	0.0
West Simsbury.....	11		South Haven.....	T.		Cleveland.....	T.	8.0
<i>Illinois.</i>			<i>Minnesota.</i>			Garrettsville.....	1	
Bloomington.....	T.		Bird Island.....	4		Philo.....	T.	
Peoria.....	T.	0.0	Duluth.....	18	29.0	Sandusky.....		5.0
<i>Indiana.</i>			Farmington.....	7		Toledo.....		6.5
Indianapolis.....	1		Milan.....	3		<i>Pennsylvania.</i>		
Rockville.....	T.		Minneapolis.....	8		Ephrata.....	3	
Syracuse.....	T.		Moorhead.....	15	38.0	Harrisburg.....	T.	10.5
<i>Iowa.</i>			New London.....	6		Indiana.....	2	
Dubuque.....	12.0		St. Paul.....	6	18.0	Johnstown.....	1	
Sloux City.....	T.	0.0	Wabasha.....	4		Philadelphia.....	T.	0.0
<i>Kentucky.</i>			Worthington.....	3		Pittsburg.....	T.	0.0
Lexington.....	T.		<i>Missouri.</i>			Seranton.....	1	
<i>Maine.</i>			Kansas City.....	†		Solins Grove.....	4	
Bangor.....	19	21.5	<i>Montana.</i>			Somerset.....	6	
Buckfield.....	40		Hayre.....	1		Towanda.....	T.	11.0
Corish.....	36		Miles City.....	T.		<i>Rhode Island.</i>		
Danforth.....	36		<i>Nebraska.</i>			Block Island.....	1	0.0
Eastport.....	14	26.5	Valentine.....	2		Kingston.....	5	
Gardiner.....	35	22.0	<i>New Hampshire.</i>			Narragansett.....	1	0.0
Lewiston.....	56	20.0	Bethlehem.....	25		Providence.....	5	0.0
Millinocket.....	40		Concord.....	5	20.0	<i>South Dakota.</i>		
Orono.....	27		Hanover.....	14		Huron.....	T.	13.5
Portland.....	18	0.0	Keene.....	10		Pierre.....	T.	?
<i>Maryland.</i>			<i>New Jersey.</i>			Yankton.....		†
Fallston.....	T.		Cape May.....	T.	0.5	<i>Vermont.</i>		
<i>Massachusetts.</i>			Flemington.....	2		Brattleboro.....	9	21.0
Adams.....	4		Phillipsburg.....	2		Burlington.....	2	20.0
Amherst.....	4		<i>New York.</i>			Northfield.....	12	
Boston.....	2		Addison.....	T.		St. Johnsbury.....	18	
Concord.....	8		Albany.....	1	13.0	<i>Virginia.</i>		
Fitchburg.....	12		Binghamton.....	1		Mount Weather.....	T.	
Nantucket.....	4	0.0	Buffalo.....	T.	12.0	<i>West Virginia.</i>		
North Adams.....	5		Cooperstown.....	6		Elkins.....	1	0.0
<i>Michigan.</i>			De Ruyter.....	10		<i>Wisconsin.</i>		
Alpena.....	3	17.0	Franklinville.....	7		Ashland.....	10	
Ann Arbor.....	T.		Geneva.....	T.		Eau Claire.....	6	
Battle Creek.....	T.		Ithaca.....	T.		Grand Rapids.....	5	
Big Rapids.....	1		Malone.....	4		Green Bay.....		8.0
Calumet.....	35		New York.....	1		Koopenciek.....	15	
Chatham.....	26		Ogdensburg.....	5		La Crosse.....		23.5
Detroit.....	T.	11.0	Oswego.....	14	16.5	Medford.....	4	
Escanaba.....	10	26.0	Poughkeepsie.....	2		Stevens Point.....	1	
Grand Haven.....	T.	0.0	Rochester.....	1	11.0	Viroqua.....	1	
Grand Marais.....	48		Rome.....	6		Waupaca.....	1	
Grand Rapids.....	T.		Southampton.....	T.		Wausau.....	6	
Houghton.....	32	19.0	Syracuse.....	3		<i>Wyoming.</i>		
Humboldt.....	38		<i>North Dakota.</i>			Lander.....	T.	
Lansing.....	T.		Bismarck.....	2	26.0	Yellowstone Park.....	6	
Ludington.....	T.		Devils Lake.....	15				
Mackinaw City.....	12							

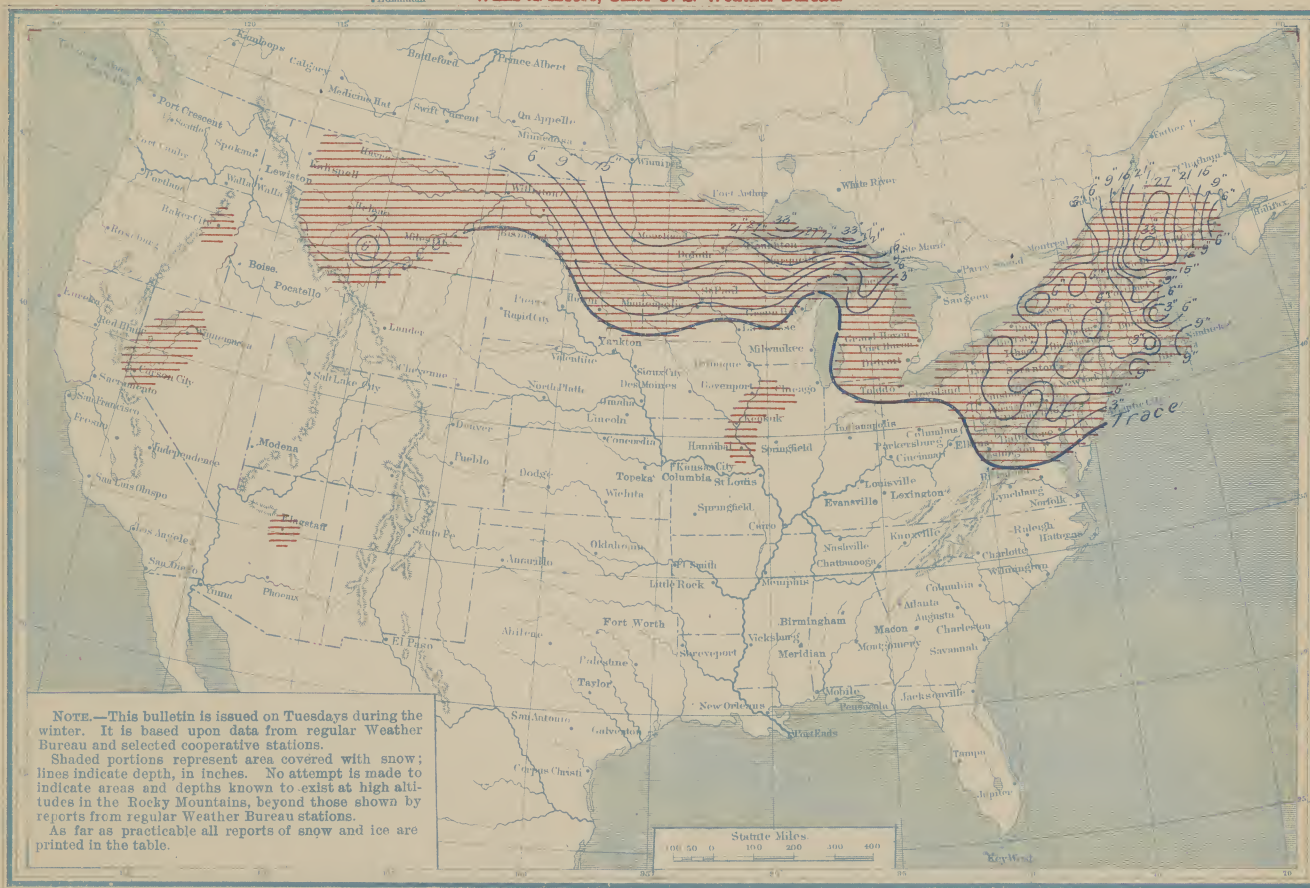
† Floating ice. T. indicates trace.



# SNOW AND ICE BULLETIN.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., March 12, 1907.

## DEPTH OF SNOW.

Over the northern portions of the Lake region and New England considerable snow disappeared during the week ending March 11, 1907, the depths at 8 p. m. on the date mentioned being from 3 to 10 inches less than at the same hour on Monday of the preceding week. The fall of snow accompanying the storm of Sunday, the 10th, materially increased the amount of snow over the Middle Atlantic States, where the depths on the 11th generally ranged from 1 inch to 6 inches more than on the 4th instant. As in the preceding week, the greatest depths are reported from the Upper Michigan Peninsula and southwestern Maine, where they generally range from 2 to 3 feet or more. The southern limit of snow this week is somewhat farther south than that of the preceding week in the Middle Atlantic States, lower Lake region, and upper Missouri Valley, but is practically the same in the upper Lake region and upper Mississippi Valley.

At the corresponding period of the preceding year the central Mississippi and Missouri valleys and the middle Rocky Mountain slope, now practically free from snow, were covered to depths generally ranging from 1 inch to 8 inches, but in New England, the northern part of the Middle Atlantic States, and in the region from western Lake Superior to eastern Montana there is considerably more snow than at the same date in 1906, the increase in the Red River of the North Valley and southwestern Maine amounting to more than a foot.

## ICE IN RIVERS, HARBORS, ETC.

In the upper Mississippi Valley, Lake region, Middle Atlantic States, and New England the week ending March 11, 1907, averaged colder than usual, the deficiency in temperature being quite decided over the eastern half of the area constituted by the districts named. In the upper Missouri River ice ranges from 20 inches at Williston to 26 inches at Bismarck, with floating ice at Yankton and Sioux City; in the upper Mississippi, from 17 inches at St. Paul to 19 inches at La Crosse; at stations on or near the upper Lakes, from 12 to 27 inches, and on the lower Lakes, from 4 to 17 inches; in the rivers of New England, from 12 to 22 inches. Over the northern portions of the Lake region and New England the measurements at 8 p. m., March 11, show somewhat more ice than was reported at the same hour on the preceding Monday, but over the southern portions of these districts and in the Middle Atlantic States and upper Mississippi Valley there was less. In the upper Missouri River the conditions on Monday, March 11, were much the same as on the preceding Monday.

The following special reports have been received by telegraph; that from Detroit relates to the conditions existing thruout the Great Lakes and is a summary of a large number of reports collected at that station:

**Albany, N. Y., March 12.**—The snow averages 2 inches in depth in the Mohawk Valley; in the Hudson Valley the depth ranges from trace at Athens to 6 inches at Corinth. Ice averages 14 inches in thickness in the Hudson River and 12 inches in the Mohawk.

**Duluth, Minn., March 11.**—Harbor ice ranges in thickness from 13 to 35 inches. Lake ice extends solid beyond vision.

**Dubuque, Iowa, March 12.**—Ice has been moving out since Sunday. There is none below the drawbridge, but it is holding above.

**Yankton, S. Dak., March 11.**—There is a moderate amount of slush ice running.

**Huron, S. Dak., March 11.**—The ice is rotten and measurements are impracticable.

**Detroit, Mich., March 12.**—Extensive fields cover the western and eastern portions of Lake Superior. In Green Bay ice is solid. In Lake Michigan ice fields have disappeared. No change has occurred since the 4th in the Straits of Mackinac, which are frozen, and no material change has occurred in Lake Huron, except the breaking of the ice bridge at the foot of the Lake on Monday afternoon. The Detroit River is practically open. In Lake Erie ice fields along the southern shore extend beyond the limit of vision. Lake Ontario harbors are solid, but there are no ice fields in the Lake except over the eastern end.

There is now much more ice in the northern districts than there was at the corresponding date of 1906.

JAMES BERRY, Chief of Climatological Division.

## DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., MARCH 11, 1907.

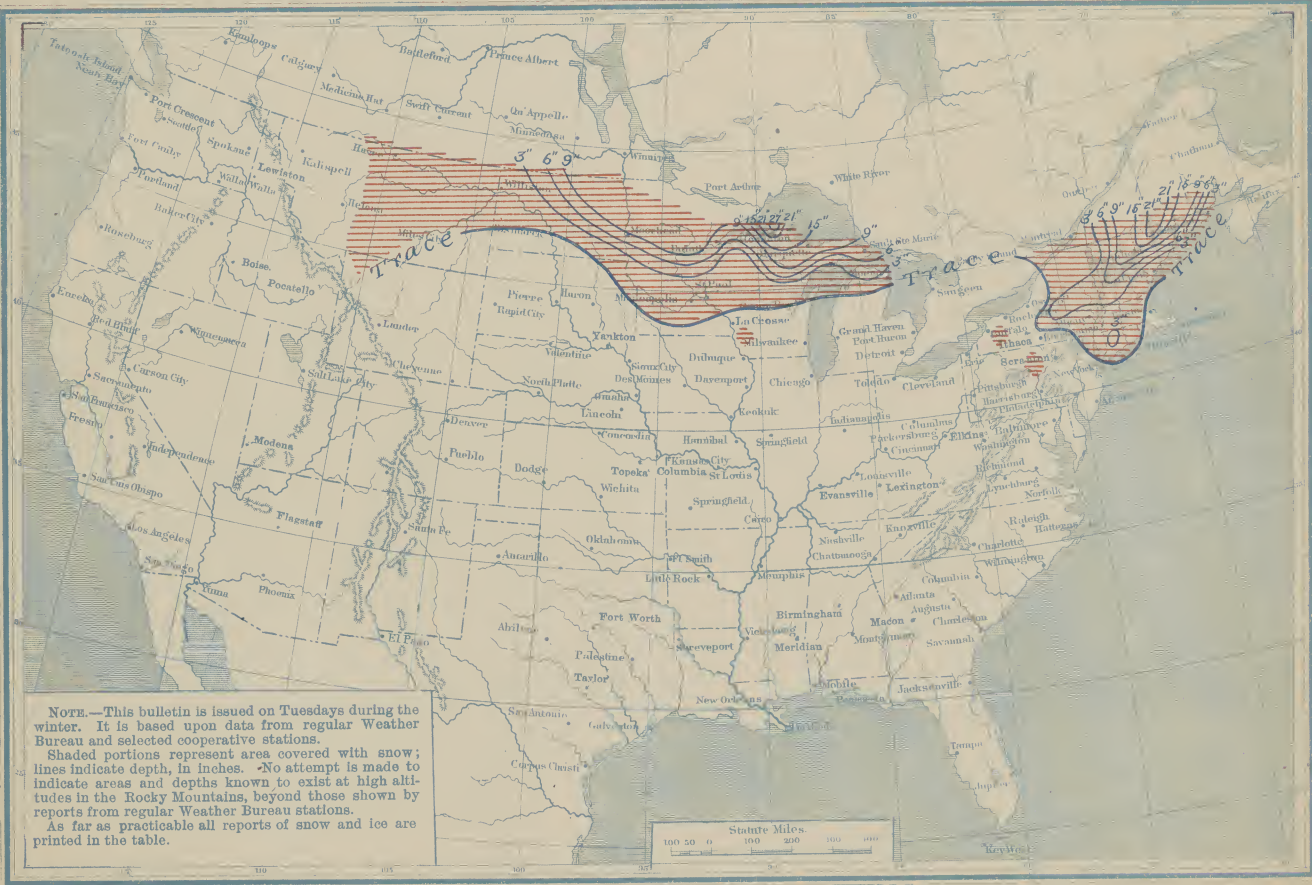
Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
<b>Arizona.</b>	Inches		<b>Michigan—Cont'd.</b>	Inches		<b>North Dakota.</b>	Inches	
Flagstaff.....	T.		Port Huron.....	T.	20.0	Bismarck.....	T.	26.0
<b>Connecticut.</b>			Sault Ste. Marie.....	17	21.0	Devils Lake.....	14	
Hartford.....	2	12.0	<b>Minnesota.</b>			Williston.....	2	20.0
New Haven.....	5		Bird Island.....	4		<b>Ohio.</b>		
West Simsbury.....	9		Duluth.....	12	27.0	Bangorville.....	T.	
<b>Delaware.</b>			Hinckley.....	12		Cleveland.....	T.	7.0
Millsboro.....	1		Minneapolis.....	3		Garrettsville.....	1	
Newark.....	4		Moorhead.....	15	36.0	Kenton.....	1	
<b>Dist. of Columbia.</b>			New London.....	6		Sandusky.....	1	5.0
Washington.....	2	0.0	St. Paul.....	2	17.0	Tiffin.....	T.	
<b>Illinois.</b>			Wabasha.....	2		Toledo.....	T.	4.0
Bloomington.....	T.		Worthington.....	2		Wauson.....	1	
Dixon.....	T.		<b>Missouri.</b>			<b>Oregon.</b>		
La Salle.....	T.	0.0	Hannibal.....	T.	0.0	Baker City.....	1	
Minoon.....	T.		<b>Montana.</b>			<b>Pennsylvania.</b>		
Monmouth.....	1		Havre.....	1		Claysville.....	T.	
<b>Indiana.</b>			Helena.....	T.		Confluence.....	2	
Auburn.....	T.		Miles City.....	T.		Easton.....	4	
Laport.....	T.		<b>Nevada.</b>			Ephrata.....	7	
Syracuse.....	1		Reno.....	2		Erie.....	T.	9.0
<b>Iowa.</b>			Winnemucca.....	2		Gordon.....	8	
Davenport.....	T.	0.0	<b>New Hampshire.</b>			Harrisburg.....	2	10.0
Dubuque.....	T.		Bethlehem.....	24		Indiana.....	4	
Keokuk.....	T.	0.0	Concord.....	4	19.0	Johnstown.....	4	
Sioux City.....	T.		Hanover.....	11		Philadelphia.....	4	0.0
<b>Maine.</b>			Keene.....	9		Pittsburg.....	2	0.0
Bangor.....	13	22.0	<b>New Jersey.</b>			Seranton.....	3	
Buckfield.....	36		Asbury Park.....	6		Sellins Grove.....	6	
Eastport.....	4	26.5	Atlantic City.....	4		South Eaton.....	7	
Gardiner.....	30	22.0	Cape May.....	T.	0.0	<b>Rhode Island.</b>		
Lewiston.....	30	18.0	Charlotteburg.....	6		Block Island.....	2	0.0
Millinoeket.....	29		Flemington.....	6		Kingston.....	10	
Orono.....	20		Hightstown.....	6		Narragansett.....	3	
Portland.....	13	0.0	Newark.....	4		Providence.....	3	0.0
<b>Maryland.</b>			Phillipsburg.....	2		<b>South Dakota.</b>		
Baltimore.....	3	8.0	<b>New York.</b>			Huron.....	T.	
Easton.....	2		Addison.....	T.		Pierre.....	?	
Fallston.....	6		Albany.....	T.	13.0	Yankton.....	T.	
<b>Massachusetts.</b>			Beaver River.....	8		<b>Vermont.</b>		
Amherst.....	2		Binghamton.....	2		Burlington.....	1	20.0
Boston.....	T.		Buffalo.....	T.	12.5	Northfield.....	4	
Fitchburg.....	8		Canton.....	2		St. Johnsbury.....	18	
Mansfield.....	7		Cooperstown.....	5		<b>Virginia.</b>		
Nantucket.....	9	0.0	Do Ruyter.....	10		Dale Enterprise.....	1	
North Adams.....	4		Franklinville.....	8		Fredericksburg.....	T.	
<b>Michigan.</b>			Geneva.....	1		Mount Weather.....	3	
Alpena.....	1	20.0	Herkimer.....	3		Stephens City.....	2	
Ann Arbor.....	T.		Ithaca.....	T.		Woodstock.....	1	
Battle Creek.....	T.		Jamestown.....	2		<b>West Virginia.</b>		
Big Rapids.....	T.		Malone.....	1		Elkins.....	T.	0.0
Calumet.....	33		New York.....	5		Romney.....	T.	
Chatham.....	23		Ogdensburg.....	2		<b>Wisconsin.</b>		
Detroit.....	7.0		Oswego.....	6	17.0	Ashland.....	7	
Escanaba.....	6	20.5	Poughkeepsie.....	3		Eau Claire.....	4	
Grand Haven.....	T.	0.0	Rochester.....	T.	10.0	Grand Rapids.....	4	
Grand Marais.....	46		Rome.....	4		Koepenick.....	12	
Grand Rapids.....	T.		Saranac Lake.....	8		La Crosse.....	19.0	
Houghton.....	26	19.0	Setauket.....	7	4.0	Medford.....	3	
Mackinaw City.....	2		Southampton.....	10		Stevens Point.....	1	
Mancelona.....	10		Syracuse.....	4		<b>Wyoming.</b>		
Marquette.....	20	12.0	Wedgwood.....	4		Yellowstone Park.....	8	

† Floating ice. T. indicates trace.



U. S. DEPARTMENT OF AGRICULTURE,  
WEATHER BUREAU.  
**SNOW AND ICE BULLETIN.**

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.  
Willis L. Moore, Chief U. S. Weather Bureau.



WASHINGTON, D. C., March 19, 1907.

DEPTH OF SNOW.

Only New England and the extreme northern districts from the upper Lake region to central Montana were covered with snow at 8 p. m., March 18, 1907. Greatly diminished depths, as compared with those of Monday of the preceding week, are shown in the upper Lake region and northern New England, while a large area in the northern portion of the Middle Atlantic States that was covered on the 11th instant was free from snow on the 18th. As in the previous week, the greatest depths, ranging from 1 foot to 2 feet, are reported from Maine. Over the Upper Michigan Peninsula and the northern portions of Minnesota and eastern North Dakota depths ranging from 6 to 18 inches are reported.

On March 18, 1906, the northern portions of the country from the New England and middle Atlantic coasts to the Rocky Mountains were covered with snow, the southern limit extending to the Ohio and lower Missouri rivers, and there were unusual depths in portions of the middle and northern Rocky Mountain regions. In eastern North Dakota and over the northern portions of Minnesota and Wisconsin, however, there is now more snow than at the same date in 1906.

ICE IN RIVERS, HARBOURS, ETC.

In the northern districts east of the Rocky Mountains the week ending March 18, 1907, was considerably milder than usual, the mean temperature generally averaging from 4° to 8° per day above the normal. Except over the extreme northern portion of the upper Lake region and in the upper Missouri and Red River of the North valleys, the conditions were favorable for the melting and breaking up of ice. At the more northerly stations on the upper Missouri and upper Mississippi rivers ice continues intact. In the former, ice ranges from 20 inches at Williston, N. Dak., to 25.5 inches at Bismarck, N. Dak.; in the latter, from 10 inches at La Crosse, Wis., to 14.5 inches at St. Paul, Minn., and in the rivers of northern New England, from 16 to 20 inches. While a number of stations on or near the Great Lakes report no ice, others report from 10 to 26 inches in the upper Lake region and from 6 to 15 inches in the lower Lake region. The reports of ice measurements made at 8 p. m. of the 18th instant, as compared with those of the same hour on Monday of the preceding week, show a general decrease, except in the upper Lake region and at the more northerly stations on the Missouri and Mississippi rivers, where there has been little or no change.

In northern New England and generally in the Great Lakes there is more ice than there was at the corresponding period of the previous year, but at this date in 1906 both the upper Mississippi and the upper Missouri rivers were frozen considerably farther south than they are now, altho the more northerly stations had less ice than now exists.

The following special reports have been received by telegraph; that from Detroit relates to the conditions existing thruout the Great Lakes and is a summary of a large number of reports collected at that station:

*Brattleboro, Vt., March 18.*—The ice is broken and is floating down the river.  
*Rochester, N. Y., March 19.*—The ice ran out of the Genesee River at this point on the 18th.

DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., MARCH 18, 1907.

Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
<i>Arizona.</i>	<i>Inches</i>	<i>Inches</i>	<i>Minnesota.</i>	<i>Inches</i>	<i>Inches</i>	<i>North Dakota.</i>	<i>Inches</i>	<i>Inches</i>
Flagstaff . . . . .	T.		Bird Island . . . . .	T.		Bismarck . . . . .	T.	25.5
<i>Connecticut.</i>			Duluth . . . . .	7	26.0	Devils Lake . . . . .	14	
Hartford . . . . .	T.	†	Farmington . . . . .	1		Williston . . . . .	1	20.0
New Haven . . . . .	T.		Grand Meadow . . . . .	1		<i>Pennsylvania.</i>		
West Simsbury . . . . .	3		Hinckley . . . . .	10		Erie . . . . .		6.0
<i>Maine.</i>			Milan . . . . .	2		Selins Grove . . . . .	T.	
Buckfield . . . . .	17		Minneapolis . . . . .	T.		<i>Rhode Island.</i>		
Cornish . . . . .	21		Moorhead . . . . .	12	36.0	Narragansett . . . . .	T.	
Eastport . . . . .	T.	25.0	Morris . . . . .	2		<i>South Dakota.</i>		
Gardiner . . . . .	15	20.0	New London . . . . .	2		Huron . . . . .		?
Lewiston . . . . .	12	18.0	St. Paul . . . . .	T.	14.5	Pierre . . . . .		?
Millinocket . . . . .	24		Wabasha . . . . .	T.		<i>Vermont.</i>		
Orono . . . . .	12		Worthington . . . . .	T.		Brattleboro . . . . .	4	†
Portland . . . . .	2	0.0	<i>Montana.</i>			Burlington . . . . .	T.	18.0
<i>Massachusetts.</i>			Hayre . . . . .	T.		Northfield . . . . .	1	
Amherst . . . . .	T.		Miles City . . . . .	T.		St. Johnsbury . . . . .	10	
Concord . . . . .	T.		<i>New Hampshire.</i>			<i>Wisconsin.</i>		
Fitchburg . . . . .	T.		Bethlehem . . . . .	13		Ashland . . . . .	T.	
<i>Michigan.</i>			Concord . . . . .	1	16.0	Eau Claire . . . . .	1	
Alpena . . . . .	T.	20.0	<i>New York.</i>			Green Bay . . . . .	T.	0.0
Calumet . . . . .	28		Albany . . . . .	T.	0.0	Koepenick . . . . .	10	
Chatham . . . . .	19		Buffalo . . . . .		10.0	Madford . . . . .		10.0
Escanaba . . . . .	1	26.0	Canton . . . . .	T.		Stevens Point . . . . .	T.	
Grand Marais . . . . .	36		Cooperstown . . . . .	3		Viroqua . . . . .	T.	
Houghton . . . . .	19	20.5	De Ruyter . . . . .	4		Wausau . . . . .	3	
Iron River . . . . .	5		Franklinville . . . . .	T.		<i>Wyoming.</i>		
Mancelona . . . . .	3		New York . . . . .	T.		Yellowstone Park . . . . .	1	
Marquette . . . . .	14	9.5	Ogdenburg . . . . .	T.				
Port Huron . . . . .		7.0	Oswego . . . . .		15.0			
Sault Ste. Marie . . . . .	7	21.0	Port Jervis . . . . .	T.				

† Floating ice. T. Indicates trace.

*Albany, N. Y., March 19.*—There are traces of snow in the Mohawk Valley; in the Hudson Valley the depth ranges from a trace at Athens to 2 inches at Glens Falls. Ice is 10 inches in thickness in the upper Hudson River, but the Mohawk River and the lower Hudson are open in places.

*Cleveland, Ohio, March 18.*—The harbor is practically free from ice. Fields on the lake extend beyond vision.

*Alpena, Mich., March 18.*—The ice in Thunder Bay is 20 inches thick; it is somewhat honeycombed and extends two miles from the docks.

*Duluth, Minn., March 18.*—Harbor ice is 18 to 30 inches thick. The lake ice fields extends solid for 20 miles.

*St. Paul, Minn., March 18.*—The ice is badly honeycombed.

*Huron, S. Dak., March 18.*—The ice is rotten and is breaking up.

*Detroit, Mich., March 19.*—Ice fields have moved out over western Lake Superior, with a small field extending out 30 miles from Duluth. Extensive fields exist over the eastern portion of Lake Superior. Ice in the St. Marys River is 21 inches thick and solid. In Green Bay the ice is softening and the snow covering is melted. There are no fields in Lake Michigan south of South Manitou Island. The decrease in ice at the Straits of Mackinac ranges from 2 to 4 inches. In Lake Huron fields are not so extensive as last week and have moved from the west shore in the southern portion. The St. Clair and Detroit rivers are open. The Lake Erie ice fields are moving north from the southern shore and breaking up. Practically no fields are reported from Ontario and the ice in the harbors is softening.

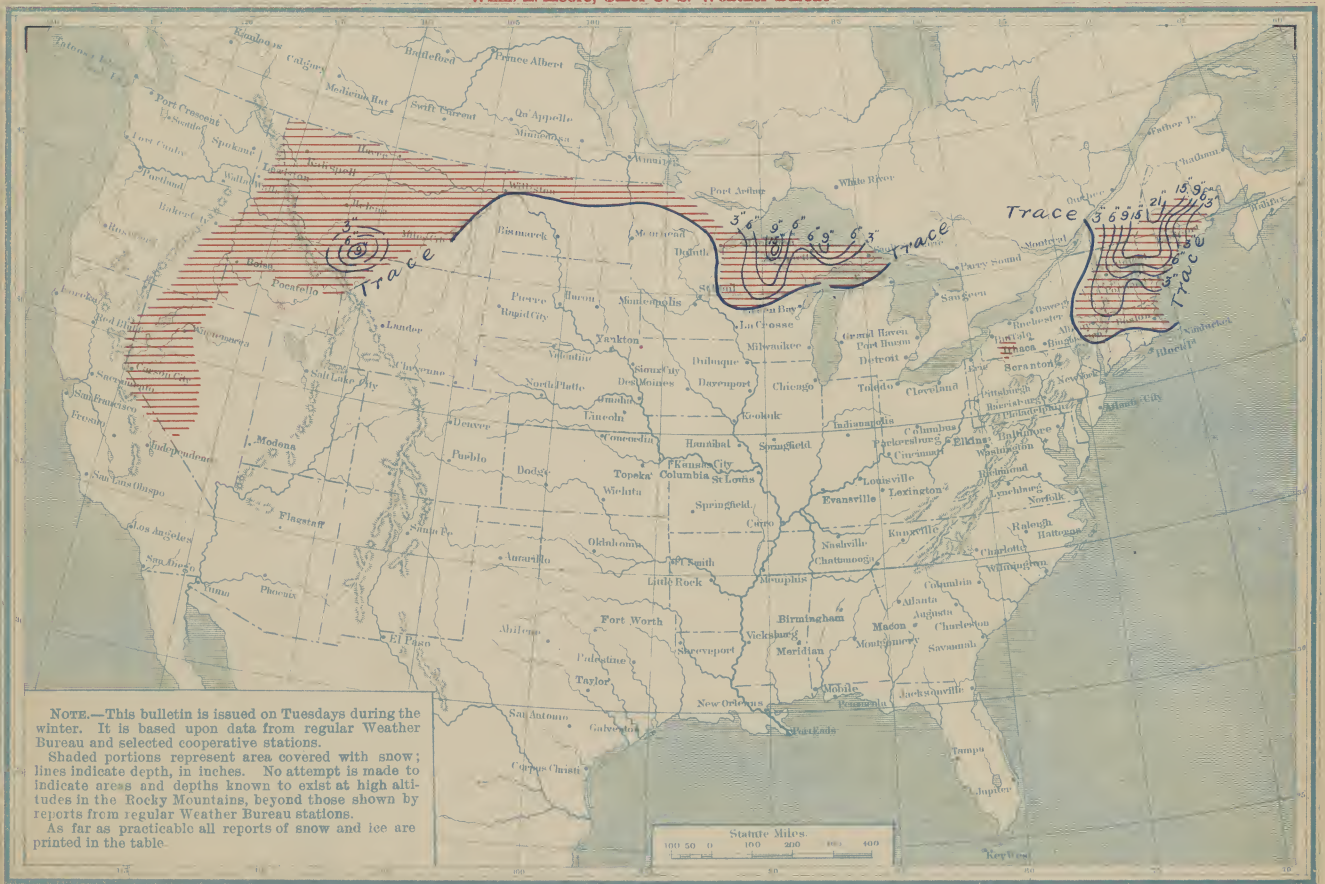
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U. S. DEPARTMENT OF AGRICULTURE  
WEATHER BUREAU  
SNOW AND ICE BULLETIN.

PUBLISHED BY AUTHORITY OF THE SECRETARY OF AGRICULTURE.

• Editor • Willis L. Moore, Chief U. S. Weather Bureau



WASHINGTON, D. C., March 26, 1907.

DEPTH OF SNOW.

With the weekly mean temperatures generally ranging from 10° to more than 20° above the normal in the central valleys and Lake region, the area covered with snow has been greatly diminished during the week ending March 25, 1907. There are still, however, material depths in northern New England and over portions of the upper Michigan Peninsula and northern Wisconsin, while over a considerable area in the central plateau and northern Rocky Mountain regions, from which no snow was reported on the 18th instant, depths ranging from 1 inch to 8 inches were reported at 8 p. m. on the 25th. As compared with the measurements made at the same hour on the 18th, an increase is indicated over a considerable part of New England, but the depths over the upper Michigan Peninsula and northern Wisconsin are much smaller. Snow has practically disappeared from northern Minnesota and eastern North Dakota.

At the corresponding date of 1906 the southern limit of snow extended from the lower Missouri Valley to the Virginia coast, and a large part of the Middle Atlantic States and Lake region was covered to depths ranging from 1 inch to more than 6 inches, with much greater depths in the upper Lake region.

ICE IN RIVERS, HARBORS, ETC.

The week ending March 25, 1907, was phenomenally mild in the central valleys and over the greater part of the Lake region and Middle Atlantic States, the greatest heat occurring on the 22d and 23d in the central valleys and Lake region, and on the 23d and 24th in the Middle Atlantic States and New England. At many stations in these districts the temperatures on the dates named were the highest that have occurred in the last decade of March since the establishment of Weather Bureau stations.

The unseasonably mild weather caused the rapid disappearance of ice in the extreme northern districts. At the close of the week the upper Mississippi was entirely free from ice and the upper Missouri was open, except in the vicinity of Bismarek, N. Dak., where a thickness of 12 inches was reported.

The following special reports have been received by telegraph; that from Detroit relates to the conditions existing thruout the Great Lakes and is a summary of a large number of reports collected at that station:

Brattleboro, Vt., March 25.—The ice is all gone at this point, but there is floating ice in the river.

Albany, N. Y., March 26.—The depth of snow in the Hudson Valley ranges from a trace at Athens to 4 inches at Corinth; in the Mohawk Valley there is no snow, except a half inch at Cohoes. There is only floating ice in the Hudson and Mohawk rivers.

Buffalo, N. Y., March 25.—There is no harbor ice. Lake ice broke up on the 20th. Field ice extends beyond vision.

Duluth, Minn., March 25.—Ice is becoming honeycombed in the harbor. It is from 12 to 22 inches thick and extends solid from Minnesota Point lakeward for twenty miles.

St. Paul, Minn., March 25.—Ice moved down on the morning of the 22d, and the river is now free.

Williston, N. Dak., March 25.—The river ice is breaking.

Detroit, Mich., March 26.—In Lake Superior an ice field of twenty miles extends eastward from Duluth; off Keweenaw Point extensive fields, heavily windrowed,

DEPTH OF SNOW AND THICKNESS OF ICE AT 8 P. M., MARCH 25, 1907.

Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.	Stations.	Snow.	Ice in rivers, harbors, etc.
Connecticut.	Inches	Inches	Michigan—Cont'd.	Inches	Inches	N. Hamp.—Cont'd.	Inches	Inches
West Simsbury	T.		Grand Marais	8		Hanover	2	
Yale	T.		Houghton	5	15.5	Keene	T.	
Boise	T.		Humboldt	20		New York.		
Maine.			Iron Mountain	1		Albany	T.	0.0
Bangor	5	21.0	Iron River	8		Cooperstown	T.	
Danforth	16		Mancelona	T.		Franklinville	T.	
Eastport	T.	23.5	Marquette	T.	0.0	Poughkeepsie	T.	
Gardiner	10	20.0	Sault Ste. Marie	2	18.0	North Dakota.		
Lewiston	15	17.0	Minnesota.			Bismarek		12.0
Millinocket	24		Duluth	T.	20.0	Devils Lake	T.	
Oroon	8		Wabasha	T.		Williston	T.	†
Portland	6	0.0	Montana.			Oregon.		
Massachusetts.			Havre	2		Baker City	T.	
Adams	2		Helena	1		Vermont.		
Amherst	2		Kalspell	T.		Brattleboro	4	†
Boston	T.		Miles City	T.		Burlington	T.	15.0
Concord	T.		Nevada.			Northfield	4	
Fitchburg	T.		Reno	2		St. Johnsbury	13	
Mansfield	1		Tonopah	2		Wisconsin.		
Michigan.			Winnemucca	T.		Eau Claire	T.	
Calumet	8		New Hampshire.			Koepenick	6	
Chatham	12		Bethlehem	15		Wyoming.		
Escanaba	T.	20.0	Concord	T.	0.0	Yellowstone Park	9	

† Floating ice. T. indicates trace.

move with the wind; over the eastern portion fields have moved out from the shore beyond vision. In St. Marys River the ice is 19 inches thick and is softening. In Green Bay the ice is softening and breaking up over the southern portion. In Lake Michigan ice fields are confined to the extreme northern portion. Ice in the Straits of Mackinac is beginning to break up. In Lake Huron the fields have practically disappeared. Ice is out of the St. Clair River. In Lake Erie the fields have moved from the south shore and no ice is reported, except from Erie to Buffalo. No ice fields are reported in Lake Ontario and the harbors are opening. Less ice is reported in all the lakes than last year.

In marked contrast with the very mild weather of the past two weeks, the second and third decades of March, 1906, were exceptionally cold in the central valleys and Lake region, and consequently there was at this time last year considerable ice formation in those districts, over a large part of which there is now no ice. On March 25, 1906, the Missouri River was frozen southward to Sioux City, Iowa; the Mississippi was frozen southward to Dubuque, Iowa; and at many stations on the lower Lakes now reporting no ice the thickness ranged from 1 inch to 6 inches. In northern Maine, however, in the St. Mary's River—connecting Lakes Superior and Huron—and in Duluth Harbor, the ice at 8 p. m., March 25, 1907, was thicker than at the corresponding date of 1906.

JAMES BERRY, Chief of Climatological Division.

NOTE.—This will be the last bulletin of this series for the season of 1906-7.